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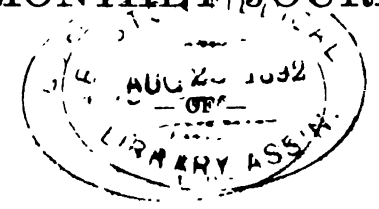

MEDICAL AND SURGICAL SCIENCE,

CRITICISM AND NEWS.

EDITED BY

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THE DIAGNOSIS AND LOCAL TREATMENT OF TUBERCLE OR SO-CALLED PHTHISIS OF THE LARYNX.

BY DR. C. TROW, TORONTO.

Mr. President and Gentlemen,—I do not intend to go fully into the diagnosis of tubercular laryngitis, as that may be found in any of the works on the throat; but allow me to make some remarks on its character, on primary tuberculosis of the larynx, and on the early recognition of tuberculous laryngitis.

In diagnosis the microscope is of great value; but I believe there are some cases, where even perhaps before this would declare anything, the throat may show signs, which would lead us to place the patient under the most favorable circumstances in order that he might be able to resist the inroads or growth of the tubercle bacillus, such as some cases of obstinate laryngeal catarrhs, waxy anæmia of fauces and larynx, anomalies of sensation (paræsthesia), paresis and paralysis of the laryngeal muscles (especially the adductors).

Mr. Lennox Browne says: "That evidence of the tubercular diathesis influences a local laryngeal inflammation in a manner eminently characteristic, and at a period long prior to the discovery of equally well-marked symptoms in the lungs, is a fact which the daily observation of those engaged in laryngeal practice establishes as incontrovertible."

Whether or not there be tubercle actually developed in the larynx, or what indeed is the nature of tubercle wherever developed, the author does not presume, and indeed does not care to decide. Seeing, however, that tuberculosis is a disease primarily manifesting itself more especially in the respiratory organs, seeing that catarrh is one of the most frequent excitations to that disease, and that many catarrhal inflammations of the lungs commence in the larynx; it is at least fair to infer that in those cases in which the eye reveals what has come to be recognized as tuberculous laryngitis before the ear detects the presence of tubercle in the lungs, the disease has primarily attacked the former organ."

Although I believe that primary tuberculosis of that organ is rare, there is no doubt that the larynx in many instances is affected, when the pulmonary lesion is slight, or even before physical examination will give any clue to its existence, as cheesy or consolidated nodules, when situated deep in the substance of the lung may long escape diagnosis.

Tubercular growths in the larynx are not rare, and they may be symptoms of primary laryngeal tuberculosis, as in syphilis, typhus, etc.; stenosis may result from tubercular disease.

We sometimes see cases with a combination of syphilis and tuberculosis of the larynx. Schmitzler considers these forms even relatively frequent. He is of opinion that syphilitic ulcers form a very suitable ground for Koch's bacilli, and pass into tubercular. Frenkel coincides in this belief.

Heinze, Guttmann and Brown each estimate that tuberculous manifestations of the larynx occur in from 25 to 30 per cent. of all cases; and that those exposed to catarrhal influences are more liable to have the larynx primarily attacked.

The curability of laryngeal tuberculosis has hitherto been looked upon with scepticism; but we know that this disease affecting other parts, such as the lymph glands of the neck, individual bones or joints, the skin, the ear, and even the lung, may run a chronic and rather harmless course, and that recovery frequently follows.

I hold that we can alleviate the symptoms in all, and in some cases cure, at least for a time.

Cases have been cited in which spontaneous recovery has taken place. Dr. Sockolowski mentions six from his own private practice. In two of these the cicatrization of ulcers had lasted four years with no change.

Heryng described eleven cured cases in ten years. Still spontaneous recovery is rare.

The disease may become chronic and lie dormant. Solis Cohen reports several such cases. Under treatment very many recoveries are recorded.

*Read before the Ontario Med. Association, July 1890.

Heryng reports that in 35 cases he obtained cicatrization, lasting a longer or shorter time in 27. In three of these the duration was respectively 9, 2 and 1 years; and in five cases ½ to 3 years. He says the larynx cured, the lung is improved, the voice becomes better, and general improvement results.

In the Hospital of the Holy Ghost at Warsaw 21 out of 50 cases cicatrized.

The best prognosis is in those cases in which there is a good general condition, with little or no interstitial changes in the lungs, and the patient living in good social conditions.

Roughly the indications for treatment are:

(1) To counteract the general phthisical process.

(2) To give as much as possible, functional rest.

(3) To relieve the pain in swallowing.

(4) To administer suitable nourishment.

(5) To heal the ulcerations, and reduce the infiltrations.

As a rule solutions should be applied by brush under the guidance of the laryngeal mirror, and the application be made to the part affected, and to that only.

Now, as to the most important of the remedies employed.

Class (*a*).—Medicines principally anodyne or anæsthetic in their action. (*b*) Antiseptics. (*c*) The surgical treatment.

In the first class, the most useful is cocaine. It is an excellent analgesic remedy in painful, difficult swallowing, and as a local anæsthetic, it facilitates laryngeal examination, applications, and surgical operations. Solutions are used in strengths from 5 to 25 per cent., the stronger for operating purposes, absolute anæsthesia lasting probably from 10 to 20 minutes, relative anæsthesia up to 2 or 3 hours. Some surgeons combine morphia or carbolic acid, and a few use it in powder or hypodermically.

Menthol.—I place it amongst the first-class, but it also belongs to the second, as it is not only anæsthetic and analgesic, but also antiseptic. It can be employed in spray, inhaler, syringe, or by the brush. Ulcers submit much better to its treatment than infiltrations. While I was working in London, I noticed the throat surgeons there as a rule, gave this drug the highest preference. Lennox Browne says it is decidedly of greater value than lactic acid. He has seen cases in which after a few days treatment, emaciation has been arrested, deglutition improved, cough and amount of local secretion diminished, and lastly an actual regain of lost weight. He also employed in these cases, the oro-nasal inhaler with menthol. or eucalyptus, oleo pini Sylvestris, carbolic acid, or creasote.

Brum recommends it in delicate, nervous persons, and in robust cases, lactic acid. Chloral hydrate is sometimes used.

Morphia, either in glycerine solution, or powder with a vehicle as starch or magnesia or sugar, or combined with other medicines, and applied to the part affected, generally acts well in relieving pain.

(*Class b*).—Drugs, especially antiseptic, locally applied.

Many laryngologists now give priority to lactic acid. Krause regards it as a specific for tubercular ulcers. It is used in watery solutions, beginning with the weaker, 10 per cent., and increasing the strength quickly up to 80 per cent. or even the pure acid. It acts energetically upon pathological tissues, but has very little or no effect on sound tissues. It is an advantage to use friction, and rub the acid well into the ulcer, or even to thoroughly scrape it with a curette before its application; and in hard infiltrations to scarify or introduce the acid by hypodermic needle. It seems to be more useful in ulcerative than infiltrative processes.

Iodoform has many advocates. Prof. Schmitzler, of Vienna, believes it is better than lactic acid. While working in his clinic I used it in several cases daily for some time, the patients always saying they were relieved or improving; but we know how hopeful the phthisical patient is and I must say that I never noticed much improvement in the objective symptoms. He uses insufflations in quantities of one to three grains for each application.

Iodol used in the same way, seems to me to be a better drug. It has the antiseptic qualities of iodoform without its disagreeable smell or taste, and further, it does not act as an irritant, and is less obnoxious to the stomach.

Creasote.—Cadier, of Paris, applied it by brush, in the proportions of creasote 1, spirits vini 4, glycerine 60. Scmidth, of Heidelberg, thinks creasote when brushed on, irritates ulcers, and gave Cadier's solution (10-20 drops) on the base of the tongue, advising the patient not to swallow, but to breathe freely during phonation. It is a strong

antiseptic, and has lately been brought forward again for pulmonary phthisis.

Creolin, as a general antiseptic remedy, is in great favor with many. I watched experiments with it in Prof. Schmitzler's clinic, in this disease, for several months, and cannot regard it with much favor.

Boric acid.—Bresgen, Schech, Schæffer and Bindermann, recommend it in powder insufflations, 2 to 7 grains, or inhalations of 1 to 5 per cent.

Carbolic acid in inhalations of 1 to 2 per cent., two or three times daily for 10 minutes.

Hydrarg. bichloride.—John McKenzie, and Massei use it in the form of inhalations, 1 in 1,000 or 2,000.

Iodine, nitrate of silver, ferrum sesquichloratum and zincum chloratum are still employed by a few.

(*Class c.*)—The surgical treatment of laryngeal tuberculosis, endo-laryngeal incisions, or scarifications.

For this treatment, Schmidt and Sockolowski considered those forms of laryngeal tuberculosis as most suitable, in which, besides relatively small changes in the lungs, and the absence of fever, the changes in the posterior region of the larynx were of œdematous character, in which the epiglottis was thickened and swollen, and there was great dysphagia, which diminished very much, or disappeared entirely after making incisions.

Curetting or scraping of the larynx,—Heryng advises it in primary laryngeal tuberculosis, or in cases of tubercular growths of the posterior part of the larynx, and in cases of ulcers with sclerotic ground and hypertrophic edges. Rosenburg also obtained good results from this method.

Cauterization by galvano cautery or chromic acid, is useful in some cases.

Lately, Memod has published an article on the use of endo-laryngeal electrolysis with long laryngeal needles bent to the angle of the ordinary curve of laryngeal instrument, and covered with protective varnish.

In treatment of infiltrations he says, there is no pain or hæmorrhage during the application of the current, and after two or three sittings the infiltration diminishes and the general condition improves.

Tracheotomy.—Some advocate it as a therapeutic measure, operating early in the disease, on the two-fold plea—

(1st) That the disease may be primary, and that by tracheotomy the lungs will be less liable to be infected.

(2nd) That functional rest is thereby afforded to the larynx, and a better chance given of success by topical medication.

Others wait until there is dyspnœa before operating, and there is a third class who decline entirely to do a tracheotomy on patients suffering from this disease.

I would expect the best results from a combined treatment, using one or more of each class, as the indications called for. In the anæmic stage, and when the thickening is only commencing, inhalations (with a proper inhaler) of stimulating volatile ingredients, as creasote, oil of pine or eucalyptus in water, are to be recommended. For the ulcers, brushing with lactic acid or menthol each second day, with iodol alone, or combined with coaine in form of insufflations in the intervals. Where the lactic acid does not act energetically, curetting is to be employed, and for the infiltrations incisions, or perhaps electrolysis.

TREATMENT OF ABDOMINAL WOUNDS FIFTY-FIVE YEARS AGO.

The following account of the treatment of an abdominal wound in 1835, by the late Dr. Isaac B. Aylsworth, of Bath, Ont., will, we are sure, be interesting to our readers. The manuscript was found among the unpublished writings of Dr. Aylsworth, whose name was a household word on the Bay of Quinté, fifty years ago.—Ed.

On the 2nd of November, 1835, about four o'clock p.m., I was called to see Johnston and to assist Dr. Stewart who was already present. Having arrived at the spot, about half a mile from Bath, I found Johnston on his back, by the side of the road, with a transverse wound, two inches and a half in length through the parietes of the abdomen, two inches above the symphysis, the extremity of the cut towards the right side of the body not extending quite to the median line.

A portion, ten or twelve inches in length, of intestine was protruded through the wound in the abdomen, which from its size, the appearance of its contents and the absence of longitudinal bands, etc., we concluded must be a part of the ileum.

A portion of the mesentery, also protruded, was attached to the intestine in which, at the most convex and projecting part, there was a wound about three-fourths of an inch in length, with everted lips. We proceeded without delay to reduce the protruded intestine. This was accomplished without much difficulty, after having emptied it of its contents through the wound. Beginning on either side with those portions nearest the wound in the abdomen, we reduced them gently and alternately, so that the wounded part of the intestine was returned last. However, before its complete reduction, we closed up the wound in it, after the manner of an interrupted suture, with two ligatures, cutting off one end of each, close to the knot and leaving the other of some length and coming out at the wound in the abdomen. After the reduction of the intestine, finding it impracticable, from the thickness of the parietes of the abdomen, the retraction of the divided muscles and tendons and the violence with which the intestine was forced outward, to pass a needle through the whole thickness of the parietes, we closed up the external wound with an interrupted suture of three stitches, passing the needle through the integuments and what appeared to be the tendons of the oblique muscles. Johntson was then carried to his dwelling in Bath, where the wound was dressed with adhesive plaster, graduated compress and bandages. Soon after this our fears concerning the bladder were allayed by a free passage of urine.

As he complained of much pain, an anodyne was administered and repeated through the night. On the next day, the 3rd of Nov., we endeavoured to procure a passage from the bowels by enemas and by administering two ounces and a half of castor oil in divided doses, without success. During this and the following day he was excessively thirsty, and swallowed large quantities of fluid, mostly cold water, which, as soon as the stomach became surcharged, was invariably returned by vomiting. He was much annoyed during this and the three or four following days with severe hiccoughs and frequent eructations of wind. Some time in the afternoon, peritoneal inflammation came on. This was promptly met. Sixteen ounces of blood were taken from his arm by Dr. Stewart. This operation was repeated thrice more before noon the next day. In all seventy or seventy-five ounces of blood were abstracted. During this time his pulse ranged from eighty to one hundred and twenty-five a minute, his abdomen became very hot, tense and painful, his tongue loaded, his breath fetid and his thirst insatiable.

Having failed in our efforts with the enemas and oil, we employed, on the evening of the 3rd of Nov., Cooper's flexible tube and pump, throwing into the intestines a solution of Epsom salts, etc. This came away loaded with fæcal matter, but nothing, as we supposed, from above the wound. On the following day, Nov. 4th, his pulse being still more variable, his skin dry and his tongue foul, hoping yet to obtain a passage from above the wound in the intestine, we gave him calomel and Dover's powder in small but repeated doses. This afternoon he several times complained of rigors, accompanied with ghastliness of countenance and restlessness of body. As the pain and tension of the abdomen still continued and we had already abstracted blood until the buffy coat no longer appeared, the last taken being quite thin and mostly serum, we applied a large plaster of cantharides to the abdomen above the wound. This acted timely and with good effect. A third physician was called. He preferred sulphate of magnesia, in divided doses, to the calomel, and recommended the removal of the ligatures.

The sulphate of magnesia was given as preferred but was quickly returned by vomit. It was repeated again and again with the same reuslt. It was now the 4th of Nov., in the evening, and we had as yet failed in all our attempts to procure a passage from above the wound in the intestine. Our patient had evidently been growing worse for the last twelve hours. About ten o'clock this evening, remembering the old maxim, "Citius est anceps, experiri auxilium quam nullum," we determined on administering the croton oil. Accordingly we gave one drop immediately, and after three hours another.

Those who have felt the solicitudes of incipient practice can easily imagine what were our feelings, when, on our return after having been absent but a short time, we found that after some severe pains and a sensible gurgling about the wound, there had been quite a copious and natural stool, that his pulses which before were hard, small and frequent, had now become softer, fuller and about eighty to the minute; that his thirst had abated,

his vomiting ceased and his general appearance much improved.

On the following day, Nov. 5th, he had another passage, took some gruel and seemed much revived. We removed the dressing and ligatures from the external wound, which we found partially united by the first intention, a portion of the wound toward the median line still remaining open. The two following days, Nov. 6th and 7th, he continued to improve, the lower parts of the intestines being kept open by enemas. But as the parts above the wound seemed to be unmoved by this means, on Sunday the 8th, we administered four drachms of sulphate of magnesia, in divided doses by the mouth. These not having produced the desired effect, towards evening he incautiously took at once on his own accord, about four drachms more. About seven o'clock this evening, having been called, we found him in great distress, the abdomen much distended, apparently with fluid, the adhesions of the lips of the external wound entirely destroyed, the wound itself widely gaping and leaving a portion of the intestine exposed to view, the peritoneal coat of which had a dark and sloughy appearance, an opening at the upper and inner corner of the wound in the abdomen, from which were flowing the watery and less consistent parts of the contents of the intestines. The fluid had all the appearance of coming from the cavity of the abdomen, as it was perceptible to the touch through the parietes, and came away abundantly by pressure. Having pressed out what we could of the fluid, brought down the opening in the intestine to that in the abdomen, removed the stitches from the intestine, drawn the lips of the external wound nearer together with adhesive plaster, applied a compress and bandages and employed the pump and tube as before, we left him for a short time, fearing that the fluid and fæces had escaped into the cavity of the abdomen, before bursting out at the external wound, and that our toil and his suffering were soon to end. However our fears were not realized.

Adhesions or that constant pressure made by the parietes of the abdomen upon its contents, must have prevented the escape of the fæces into the cavity of the abdomen. Before morning he had a passage by stool. The discharge of fæces from the wound gradually diminished, and after continuing about a fortnight wetting the cloths and bed and producing much inconvenience, entirely ceased. The wound itself, although irritated by the fæcal discharge, soon began to granulate kindly and continuing to improve, is now completely healed, leaving a cicatrix two inches and a quarter in length. For some time stools were daily procured by enemas. Afterwards small doses of Epsom salts or castor oil were employed, aided by enemas occasionally. Once or twice the stools were tinged with blood, After one of these stools, there came away a membranous substance four or five inches in length, and supposed by Dr. Stewart who saw it to be a portion of mucous membrane.

At first before a stool, he had considerable pain, with a gurgling noise about the wound. These pains gradually diminished in intensity. They have now together with the noise, entirely left him. He now keeps his bowels free from constipation, by taking occasionally (sometimes a week or more intervening) a small portion of castor oil, takes the same quantity and quality of food, to which he was formerly accustomed, labours some, but feels weak after exercise too severe or long continued, wears a truss, and seems to have the prospect, if not of long life, at least of enjoying a tolerable degree of health and comfort, and of remaining for some time, a living, walking witness of the utility and efficacy of the healing art.

ISAAC B. AYLESWORTH.

Bath, Jan. 15th, 1836.

Correspondence.

OUR PARIS LETTER.

To the Editor of the CANADA LANCET.

SIR,—Thinking some of your readers might be interested in a hospital, which has, especially of late become celebrated from the discoveries in the nervous system which have emanated therefrom, I send the following notes on the Salpêtrière. This large hospital lying in the south-east of Paris was built during the reign of Louis XIV. Its construction was to a large extent due to the efforts of the Duchesse d'Aiguillon, the first instance we find in France of a lady's aid in the building of a hospital, as previous to this time they were all built by the King or the Church. Originally intended as a general hospital (to which a prison was attached), its character has gradually changed, so

that at present its occupants consist almost entirely of aged women and patients suffering from nervous and mental diseases.

The buildings are irregular in form and cover with the grounds in connection an area of about 80 acres.

The wards as in many of the older hospitals in Europe are very irregular in form and size, but as a rule the light and ventilation are fairly good. There are in connection with the hospital more than 5000 persons. The number of beds is 3864, and of these 2865 are for aged women, the remainder being devoted to mental and nervous cases.

A large Electrical service which is attended by patients from all the hospitals of Paris is thoroughly fitted up. The number who are treated often exceeds 300 each day. Dr. Vigouroux who is in charge of it has invented an apparatus for measuring the electromotor force. He finds that in Basedow's disease there is a marked diminution of electrical resistance (about $\frac{1}{2}$). As this is found in the earliest stages and is pathognomonic in pure cases, its value, from a diagnostic point of view, in undeveloped cases, is often great. Static electricity is employed here with excellent results in cases of lowered nutrition, such as neurasthenia.

The Bath service is excellent and contains conveniences for baths of all sorts, plunge, douche, vapour, sudation, etc.

In the Photography service is to be found all the necessary appliances for the practice of the art.

The Museum, though not large contains many interesting specimens of all kinds, a portion of which consists of mouldings of rare cases made in the service of the hospital devoted to this purpose.

As to the physicians, the present generation are by no means the only ones whose names are known to medicine. Here it was in the beginning of this century that Pinel introduced his humane reform in the treatment of the insane, which has borne such bountiful fruits. In this he was ably followed by his disciple Esquirol, whose work was in turn supported and enlarged by such widely known men as J. P. Falret, Baillarger, and Felix Voisin. Foremost among the physicians of to-day stands Professor Charcot, on whom his 64 years of life sits lightly, notwithstanding the vast amount of original work done in the past 28 years which he has devoted to the service of the hospital. His writings both on general medicine and the nervous system are too numerous and too well known to need comment. The number of beds in Dr. Charcots' wards is 212, of which 160 are reserved for affections of the nervous system.

The amphitheatre in which he delivers his weekly lectures will seat about 400 and it is often crowded by doctors from every quarter of the globe. Of course any number of interesting cases are presented at his clinics, and the experiments which he has here lately made in hypnotism have been very interesting. Among others let me mention a case of "Œdème Bleu" occurring in the hand of a hysterical girl of 20. Within ten minutes after being hypnotized, the œdema had entirely disappeared, the contracture given place to perfect mobility, the skin had returned to its normal color, and during a certain time the patient recovered complete use of the hand. He also produced in the hand of another hysterical girl by means of hypnotism an affection which was precisely the counterpart of that above mentioned. This of course he could make disappear permanently without any difficulty.

Perhaps one of the most marked effects of hypnotism is seen in hysterical joint affections, in which often after months of treatment in surgical wards the patient is *permanently* cured in five or six sittings.

Dr. Jeffroy, whose researches, alone or in collaboration with Drs. Charcot or Duchenne, in pachymeningitis, infantile paralysis, neuritis, progressive bulbar paralysis, chorea, *myelite cavitaire* (syringomyelia), etc., have made widely known, has 250 beds, of which the larger, number are reserved for nervous patients. In his wards are many rare cases. Among others was one of Morvan's disease, which has recently died from lung complications. The autopsy which Dr. Joffroy has just made shows the typical lesion of syringomyelia in the cervical cord, a most interesting addition to the much discussed pathology of this disease.

Dr. Falret, following in the footsteps of his father, has written on insanity and asylums, the soundness of which is well demonstrated by a visit to his private asylum at Vanves.

I much regret that lack of space forbids me to mention others whose labors have contributed to the brilliancy of the school of the Salpêtrière of to-day, or to speak of the consultation service where large numbers of nervous and mental cases are treated daily. I am, etc.,

D. CAMPBELL MEYERS.

Paris, June 26th, 1890.

Selected Articles.

CASES OF INTUSSUSCEPTION TREATED WITH THE AID OF BARNES' BAG; WITH REMARKS.

Of the two cases which I propose to relate, for the purpose of showing that Barnes' bag may sometimes be usefully employed for reducing and preventing return of an intussusception, the first occurred in 1877. The patient, a man of fifty-seven, was in the London Hospital under my colleague, Dr. Stephen Mackenzie. Six months before admission he had noticed that there seemed to be a constriction in his rectum. He passed his fæces in small lumps streaked with blood. The bleeding increased, until it amounted, according to his estimate (which was probably excessive) to as much as a teacupful three or four times daily. These symptoms subsided under treatment, but were followed by loose motions and by two attacks of bleeding and pain. During the later attack he felt the gut protrude externally for two inches and then return. This happened three times in half an hour, and the pain was excruciating. The pain and bleeding continued up to admission, seven days from the outset of the attack, and a slimy discharge took place from the rectum. On admission the patient was a pale, cachectic, wasted man. The abdomen was distended, tympanitic, and tender, especially the hypogastric region. No tumor could be felt in the abdomen. On rectal examination a rounded firm swelling about the size of a hen's egg, with a velvety surface, was detected. The finger could be passed all round it, and at its apex was an orifice into which the finger could be readily passed. Examination with the speculum showed that the mucus membrane was deeply congested. There could be no doubt that an intussusception existed, and Dr. Mackenzie, whose description I have followed, asked me to see the case and treat it. As the intussusception was within reach, and, from the absence of abdominal tumour, appeared likely to be of limited extent, I thought that it would very probably yield to the equable pressure which could be exercised on it by distending a Barnes' bag with fluid after introducing it into the rectum empty, and so it proved. The intussusception gradually receded, and finally disappeared altogether. "With reposition of the bowel the patient passed a quantity of flatus and liquid fæces, and obtained great relief. A swelling was noticed in the left inguinal region, but this disappeared in a few days. He remained in the hospital a couple of months; the hæmorrhage and slimy discharge disappeared, but his motions were nearly always liquid or semi-solid, and he suffered from flatulence and crampy pains." He continued under Dr. Mackenzie's observation until his death, about a year and a half later. The diagnosis which Dr. Mackenzie formed at the time when the patient was in the hospital was "an nular stricture of the decending colon, leading to prolapse of the bowel through the straining efforts necessary to overcome the obstruction"; and at the post-mortem which Dr. Mackenzie obtained at the Leytonstone Workhouse he found primary cancer of the sigmoid flexure and secondary cancer of the peritoneum and liver.

The second case occurred recently Alfred B., seven months old, was brought to the receiving-room at the London Hospital by his mother on Sunday, Nov. 17th, 1889. She said that the bowel had come down, and on examination by my house surgeon, Mr. Hicks, the child was found to be suffering from intussusception, and was at once admitted into the wards. The mother stated that about a fortnight ago she had noticed one morning that the child seemed to be in great pain, very restless, crying incessantly, and vomiting. About four o'clock in the afternoon of that day the child passed a quantity of blood. The mother at once took him to the local doctor, who treated him up to his admission into the hospital. Blood continued to flow from the rectum for three days, and then stopped, excessive diarrhœa taking its place. Diarrhœa and vomiting continued till the child was brought to the hospital. On the previous day the bowel had descended, and the mother had pushed it back; but as it would not remain up she thought it best to apply to the hospital for relief. After admission Mr. Hicks saw the child and reduced the intussusception by injecting two pints of water with a Higginson's syringe. The injection was effectual for a time, but the next morning the bowel was down again. It was noticed that the ileo-cæcal valve formed the apex of the intussuscepted portion of bowel which projected considerably beyond the anus. Reduction of the intussusception was easy as far as the upper part of the rectum; but all attempts to reduce it further by means of injections of fluid and insufflation aided by position failed, as shown, on examination of the abdomen, by the persistence of a characteristic tumour in the position of the descending colon and sigmoid flexure. As often as the bowel descended it was replaced and retained by strapping the buttocks together. In spite, however, of all that could be done, it constantly recurred, and on Nov. 22nd, I made an ineffectual attempt to reduce it by injections and insufflation, aided by suspension of the child by his legs. Finding that I could not succeed in this way, I reduced the intussusception as far as it would go, and retained it by the introduction into the rectum of an empty Barnes' bag, which was then distended with air. Instructions were given that the bag should be removed twice a day to allow the

escape of liquid motions; my primary object was to prevent the bowel from descending, with a view to favoring further efforts at reduction, and I hoped that the peristaltic action of the intestine, exerted fruitlessly for the expulsion of the bag, might act in the opposite direction, and assist the devolution of the involved intestine. During the first day little impression was made, for the bowel descended when the bag was removed, and I then had the bag replaced and retained for twenty-four hours. At the end of that time the tumor had disappeared, and on taking away the bag a large quantity of flatus escaped. On Dec. 4th the notes stated that "the patient has from day to day been gradually getting better from the intussusception, passing fairly good motions." On only one occasion subsequently to the reduction was any blood passed; and as the abdomen was flaccid, and no tumor could be felt on the most careful examination, this escape was attributed either to some remaining congestion of the previously engaged bowel or to ulceration. The child continued regularly to pass motions, was free from sickness, and took the breast as usual, but he began to emaciate. A large abscess formed in the neck and was opened by Mr. Gedge. An extensive purpuric patch appeared on the left side of the abdomen, reaching from the ribs to the crest of the ilium, with small spots and petechiæ around it, and another large patch occupied the left side of the neck. The abdomen was retracted; there was no trace of any tumor on either side; the protrusion of gut did not return, and the bowels were regularly relieved. Nevertheless the child became thinner and weaker, and died on Dec. 13th, twenty-six days after admission, and nearly three weeks after the reduction of the intussusception.

The mother refused to allow any inspection, even of the abdomen only, notwithstandng all persuasion, and thus the conclusive demonstration of the efficacy of the treatment and the explanation of the cause of death are necessarily wanting. I cannot doubt, however, that the intussusception was reduced, because no tumor could be detected, natural motions free from blood were passed, there was no sickness, and the child was free from pain. Granting this, the question arises, what was the *modus operandi* of the distended bag in the reduction of the intussusception? Two explanations present themselves. The first is that the reduction was due to the peristaltic or antiperistaltic action of the bowel which contained the intussusception, and this appears to me to be exceedingly probable. A second idea which occurred to us was that the reduction might be due to the accumulation of gas above the bag. The bowel not being sufficiently nipped to prevent flatus from passing, it would escape through the apex of the intussusception, and then collect between the intussuscipient and intussuscepted portion, and so exert the same influence as artificial insufflation. If this view be tenable the method of reduction may be described as the method of natural insufflation through the agency of Barnes' bag. Whichever may be the correct explanation, it is apparent that the use of the bag was very different in the second case from its use in the first. The bag in the first case was simply a convenient method of applying pressure. It acted in the same way as injections or insufflation, but more expeditiously, with less risk to the bowel, and with greater accuracy and precision. In the second case it acted indirectly by blocking the canal, forming a *point d' appui* for the peristaltic contraction of the muscular fibres of the intestine, and preventing the exit of flatus. It also prevented the protrusion of the bowel from the rectum, and, if it had done nothing else, would have enabled us to renew our efforts at a reduction by injections, insufflation, manipulation, and position, with improved prospects of success. The cases in which this adjunct to our methods of treating intussusception may be found serviceable are clearly not the cases of acute strangulation, in which nothing can pass through the engaged intestine, or cases where adhesions have formed, bnt those which are also open to treatment by injections and insufflation, but which readily recur on replacement or do not disappear entirely under injections of air or fluid. In these subacute or chronic cases a trial of the method would not prejudice any other measures to which, in the result of failure, it might seem advisable to resort. It may also be useful in keeping up troublesome prolapse of the mucous membrane of the rectum.—Walter Rivington, M. D., in *The Lancet.*

FEVER IN CHILDBED.

A meeting of the Obstetrical Society of London was held on Wednesday, July 2nd, Dr. A. L. Galabin, President, in the chair.

Dr. Robert Boxall read the remainder of his paper on the subject of Fever in Childbed. Among other conclusions, he submitted that the gradual decline in the number of fatal cases observed in the early months of 1884 was brought about in part by systematic attention to points of general hygiene, more particularly by the midwives and nurses, and in part by the progressive elaboration of details concerning the use of the antiseptics employed. That the marked improvement which took place in May of the same year was effected partly by the substitution of sublimate for carbolic and Condy, as the general antiseptics in use, and partly by the continuance of the same beneficial influences. Attention was also drawn to the fact that, as no change had been made in the method of administering the douche, its mechanical and

ecbolic effects had remained unimpaired. That as the strength and character of the antiseptic agent employed in the douche solution had been the only variable factor, corresponding variations in the conditions of the hospital afforded evidence of their comparative value. Such variations were shown to have taken place; for when the sublimate douche solution was reduced in strength, and again, when the sublimate douche solution was replaced by salufer, the death-rate rose and septicæmia re-asserted its influence. It was remarkable that the only three deaths which had occurred from septic poisoniug during the last five years should have taken place in the two short intervals, amounting together to less than twelve weeks, during which these solutions were used. It was pointed out that unless such an antiseptic solution was used as was capable of effectually and rapidly destroying septic material, and unless the external genitals were carefully washed beforehand with a similar solution, the routiue employment of the douche during puerpery was liable, from the danger of unavoidably introducing septic material, to be attended with positive danger to the patient, and that under such circumstances its mechanical and ecbolic advantages might be more than counterbalanced by its want of sepsis-destroying power. Unless and until the manifold sources of septic infection could be traced, and with certainty dealt with outside the body, the routine employment of the douche required no defence.

Dr. Braxton Hicks said that he had read a paper at the Dublin meeting of the British Medical Association many years ago on the Use of Antiseptic Uterine Injections. On that occasion he was opposed by the late Sir James Simpson. He considered that care should be used in injections, especially if the patient was restless, as the thoracic movements caused a tendency to the indrawing of fluids.

Dr. Hayes regretted that Dr. Boxall had not included in his report the period when he and Dr. F. Barnes were physicians to the hospital. In 1879, upon the re-opening of the hospital under an entirely new *regime*, the antiseptic rules adopted were those drawn up by Sir Joseph Lister. Absolute phenol 1 in 20 was the antiseptic used for hands and instruments, and 1 in 40 for vaginal injections. The results were highly satisfactory. He had had only one case of serious illness, and that was one of sapræmia induced by unquestionable disregard of the antiseptic rules. The patient recovered. He had adopted vaginal injections, with 1 in 40 or 1 in 80 carbolic acid in every case the for first week after labor.

Dr. F. Barnes used no vaginal injections, and his cases had done equally well. He was struck with this at the time, and he now thought that vaginal douching after labor as a general rule was unnecessary—indeed, with the ordinary run of nurses, was dangerous. They were careless about the cleanliness of the tubes, etc. He had, therefore, given it up unless the lochia became offensive, or the patient showed symptoms of illness. In suitable cases he advocated intra-uterine injections. He recomended antiseptic absorbent wool in place of diapers.

Dr. Walter Griffith thought there was greater risk in lying-in hospitals than when a patient wa confined in her own home. If doctor, nurse, and instruments were clean, all routine douching could be done away with. On the other hand, most people accustomed to habits of cleanliness preferred the douche night and morning for the first few days after labor.

Dr. Leith Napier did not think, with Dr. Grigg, that a single intra-uterine injection of one-sixteenth of a grain of perchloride of mercury would prevent or check the development of septicæmia. He asked whether the risk of routine douching was not greater than that of waiting until indications for douching arose. In inflammatory puerperal cases he thought that frequent douching was hurtful and that vaginal suppositories of iodoform were preferable. Mercuric perchloride was, on the whole, the best antiseptic for the purpose. At present creolin answered well and was non-poisonous.

Dr. Cullingworth said he was responsible for having introduced salufer in the General Lying-in Hospital as a non-poisonous substitute for perchloride of mercury. At present he considered routine douching essential in lying-in hospitals, but not in private practice, and he mentioned that in the lying-in hospitals of Boston and New York the best results were not obtained until the douche had been deliberately abandoned. He thought possibly the salufer had failed through the clogging of the valves and apertures of the apparatus by the salufer which was thrown down from the solution in cousiderable quantity. He highly recommended wood-wool pads.

Dr. Boxall, in reply, said that the intra-uterine douche was reserved for cases in which the hand or some instrument had been introduced into the uterus, or in which the fœtus was macerated or decomposed, or, again, in which clots or pieces of membrane were retained. In hospital and private practice he did it in such cases immediately after labor, but only exceptionally during puerpery, and in these he usually employed a soft rubber catheter or piece of elastic tubing. He thought much harm might be done by douching whenever the discharges were foul. The parts should be examined, beginning at the vulva and washing any part where decomposition was taking place. He thought 1 in 1000 sublimate solution far less irritating to the hands than 1 in 20 carbolic acid solution. He employed a 1 in 2000 sublimate solution during labor and immediately after delivery,

but gave as a rule, no douche during puerpery. No advantage had been gained by using iodoform suppositories in addition to intra-uterine irrigation, nor did he think they were efficient substitutes for irrigation. He recommended absorbent cotton in place of napkins, and preferred it to wood-wool. He advocated the use of strong antiseptics in all cases, because weaker solutions were not so certain in preventing sepsis when the tissues were bruised or otherwise weak.—*Lancet.*

PYROSIS OR WATERBRASH.

Few symptomatic conditions are of more common occurrence than *pyrosis* or waterbrash, and yet there is little or no agreement amongst authorities as to its nature and the circumstances of its occurrence. Several cases having come under my notice, I purpose to enquire whether it is not possible to obtain rather a clearer notion of what the condition really is, and what is its probable explanation. As I regard it, pyrosis is a paroxysmal condition rarely occurring before puberty, generally beginning with pain in the epigastrium of variable severity, which is increased by movement, especially in the erect posture, but often relieved temporarily by complete rest, and relaxation of the abdominal wall. This is followed after an uncertain interval by the discharge of fluid from the mouth, by an act which is quite distinct from true vomiting. There is no nausea, and no effort. At most, the fluid is merely regurgitated from the throat, and often quite passively ejected. It may, and often does, lead on to actual vomiting; but when this happens, the transition is always obvious, if it is looked for, both as regards the manner of discharge and the character of the fluid. The fluid in true waterbrash is thin and watery, clear or nearly so, mawkish in taste, alkaline in reaction, varying in amount from a spoonful to a pint or more, and (so far as I have seen) it contains no formed elements beyond a few granular cells and some squamous epithelium. When supplemented by true gastric eructations or vomiting, there is generally some mucous and grumous deposit, of whatever the stomach may happen to contain at the time; so that in order to get a specimen for examination it should always be collected in the early part of a paroxysm. The fluid generally darkens on the addition of a few drops of ferric perchloride, and (in the cases which I have tested) there has always been some trace of an amylolytic action, sometimes very marked. These are obviously the characters of ordinary saliva. I think that cases may be conveniently arranged in three groups.

In the *first*, there is no obvious indication of gastric disorder, nor are the attacks clearly related to any particular article of food. The sufferers in this group are generally women of highly nervous temperament; and as a rule the symptom is either associated with pregnancy, or pelvic disorder. It may be added that initial gastric pain is sometimes absent in waterbrash of this type. The *second* group comprises cases in which stomach disorder may or may not be present, in which the attacks are clearly due to some offending article of food, such as oatmeal, rye-bread, smoked fish, and so forth. A medical practitioner told me that he always suffered from pyrosis badly whenever he went to Scotland; although he was perfectly free from anything of the kind when at home, at work. Thinking it might be due to the porridge, which he always took regularly when away, he tried it at home, and immediately pyrosis recurred. Similar cases are alluded to by Cullen. In the *third* group of cases, there are always clear indications of gastric disease, often of a serious nature; and while in these cases pyrosis is sometimes worse after particular kinds of food, it often occurs indiscriminately after all ordinary food. Chronic gastric catarrh is the most frequent concurrent disorder. In quite a large proportion of cases, the stomach is relaxed and dilated, sufficiently to admit of splashing sounds being heard on succussion, and in some there is organic stricture of the pylorus.

The following case, taken almost at random from my hospital case-book, belongs to the third group, and affords a typical, illustration of pyrosis. J. B., male, 38, iron-worker, Oct. 19, 1888, complaining of vomiting, obstinate constipation, and pain in the stomach. No history of intemperance or serious previous disease. Present illness began with "bloated feelings" in the stomach after meals. He appears to have been a large eater, and to have eaten hurriedly. The trouble increased, and often obliged him to give up work for two or three weeks at a time. Has lost weight rapidly of late. *On admission;* general unhealthy and emaciated appearance. Tongue moist, thick fur on dorsum, red tip and edges. General uneasiness in stomach after food, and subject to paroxysms of burning pain, particularly towards evening, followed by vomiting. Flatulent; bowels costive. The large bowels can be traced on palpation above the umbilicus, and down into left iliac region: no abdominal tumor apart from this. The stomach is distended and obviously dilated. Nothing of importance detected elsewhere. After free enemata the fæcal tumor disappeared; but the uneasiness after food, together with occasional attacks of pain followed by vomiting, continued. Put on an alkalinized milk diet, which agreed better than any other food. The paroxysms of pain develop quickly, and occur for the most part towards evening or at night. Soon after the pain begins, there is a gush of clear, tasteless fluid from his mouth. If he lies on his back, he involuntarily

swallows the fluid. The fluid has all the characters previously decribed. On one night the flow continued for about four hours, and more than three-quarters of a pint was collected. Generally the flow ended with nausea, and true vomiting, with the discharge of a large quantity of highly acid frothy sarcinous vomit, which gave complete temporary relief. Sometimes the pyrosis would cease without vomiting. The vomit was tested for free hydrochloric acid, but with negative results. Later on, it was thought that some obscure induration could be felt in the neighborhood of the pylorus, but no distinct tumor could be made out. Ultimately the man was discharged much relieved by treatment.

From what I have said, it seems perfectly clear that, wherever the fluid comes from, it certainly does not come from the stomach or any part below this. In the case I have quoted, the stomach was full of an acid sarcinous fluid, while clear alkaline amylolytic fluid was being discharged from the mouth. There seems to be little doubt that pyrosis is a paroxysmal secretion of saliva. Admitting this to be correct, its mechanism must be that of a nervous reflex and in my opinion, the facts support this view. Such a mechanism implies the existence of peripheral irritation acting upon the salivary glands through intervening nervous structures, the centre of which is in the medulla. Now there is not a particle of evidence pointing to any disorder of the salivary glands in pyrosis; and, since the part which they play in the process is probably purely physiogical, they may be dismissed from consideration. With regard to the nervous structures involved, there is reason to suppose, from the greater frequency of pyrosis in women, and from the frequency of its association with a highly nervous temperament, that (at least in many cases) we have to do with a specially and morbidly irritable condition of the nervous centres. Such a condition would obviously be an important and fundamental predisposing cause of pyrosis. It would be a state of things almost exactly parallel with what we see in asthma; in fact the analogy between the pathology of asthma and pyrosis would appear to be extremely close. Thus an indigestible meal, or an inhalation of dust, etc., which is quite inadequate to produce any respiratory disturbance in a healthy subject, is frequently, as we well know, the exciting cause of a serious asthmatic seizure in a subject possessing special nervous susceptibility. So in pyrosis, we ought not to ignore the importance of morbid nervous excitability as a factor in its causation. To sum up, I regard pyrosis or waterbrash as a neurotic affection of reflex origin, characterized by paroxysmal salivation, and due to peripheral irritation generally proceeding from the stomach, but not infrequently from other parts, especially the pelvic generative organs of the female. Opiates (in some form or other) have long been recommended as especially useful in pyrosis; and we can easily understand, after what has been said, how this remedy acts. Opium is not in any way curative, but gives relief by temporarily deadening the sensibility of the gastric mucous membrane and the nervous centres. The chief objection to it is that it depraves the appetite, and increases the constipation which is generally troublesome. When opiates are employed at all (and they are occasionally of much service in the purely neurotic forms of pyrosis) they should be given only in minimal doses, and combined with a fair dose of belladonna. The latter drug prevents the constipating effect of the opium, and reduces still further the sensibility of the sensory nerve-endings in the stomach. Obviously the etiological indication ranks first in importance, when it is practicable. All likely causes of peripheral irritation must be searched for carefully, and treatment should be directed to their removal. So far as gastric irritants are concerned, much may be done by periodic cleansing of the stomach—from above downwards, by means of washing out the stomach (lavage). In cases of moderate severity, the former plan alone often answers admirably. Thus, I advise an aperient dose of Carlsbad Sprudel salts, freely diluted, every second or third morning; and as a regular medicine —*Sodii phosphatis*, ʒ j; *Sodii bicarbonatis*, gr. x, dissolved in some aromatic water or mild vegetable bitter, thrice daily, one hour before meals.

In all severe cases of pyrosis associated with confirmed chronic gastric catarrh, or gastric dilatation, there is no remedy equal to a daily washing out of the stomach with water (in which a little borax may be dissolved with advantage), until the fluid returns quite clear. Under this treatment, if skilfully carried out, the dyspepsia disappears, and constipation ceases—provided, of course, that there is no incurable organic disease of the stomach. Properly performed with a rubber tube made for the purpose (moistened with milk in preference to glycerin), it is not nearly so formidable or unpleasant a method of treatment as is commonly supposed, and patients soon learn and like to perform it for themselves. The diet requirs careful regulation, and when there is much gastric catarrh, an exclusive diet of alkalinized milk is desirable for a time. The addition of *Sodii bicarbonatis*, gr. xx, *Sodii chloridi*, gr. xx, and *Magnesiæ levis*, gr. x, to each pint of milk, diluted with half its bulk of hot water at the time of administration, answers the purpose very well.—Alfred H. Carter, M.D., in *Practitioner*.

A SIMPLE METHOD OF CONTROLLING OBSTINATE EPISTAXIS.

Not very long ago a man walked into my office bleeding profusely from the right nasal cavity.

He had had similar attacks on previous occasions, which were always very difficult to manage, and during one of them he had nearly bled to death, despite the efforts of the two physicians in attendance. He had finally to be transported to the hospital, where the hemorrhage was checked with the assistance of Bellocq's cannula. The present attack had lasted three or four hours, had resisted the usual means of treatment, and the patient declared he had lost a pint of blood. During the ten minutes or so that he had been awaiting his turn in the waiting-room, he had filled the bottom of a cuspadore to the depth of two inches with blood coagula. Despite his powerful physique—he was tall and weighed about two hundred and fifty pounds—he showed signs of great weakness, was pale and exsanguinated, and breathed with difficulty through the mouth, the nose, from which blood rapidly dripped, being stopped up with clots. I seated him and packed his nasal cavity with absorbent-cotton pledgets, squeezed dry of carbolized solution, but without avail. The blood oozed through the firm packing. I removed the cotton, made him blow out the blood-clots, and introduced Goodwillie's nasal speculum, but failed to recognize the source of the hemorrhage, owing to the impossibility of wiping away the blood as rapidly as it welled up from the deeper recesses. What I did recognize, however, was the fact, that the man was rapidly growing weaker, and that he was in imminent danger of falling from the chair in a swoon. There was but one thing to do and that was to cork up his nasal passages, anteriorly and posteriorly, without loss of time. I had no Bellocq's cannula, however, and there was no time to procure one. In this predicament I bethought me of a simple substitute for the Bellocq, which served me so well that the hope that it may render the same service to others, under the same embarassing circumstances, must be my excuse for presenting this account of an otherwise very uninteresting experience. I had some rubber drainage-tubing, of assorted sizes, on hand, from which I selected a piece of small calibre, but of sufficient resiliency, about the thickness of a parlor match, and about ten inches in length. One end of this I introduced into the right nasal cavity, and pushed it along the floor of the inferior meatus, through the clots, until it reached the pharynx, whence it curled forward within easy reach of forceps, by which it was drawn out at the mouth, meeting the other end projecting from the nose. The subsequent steps were similar to those employed after the passing of the Bellocq cannula. To the mouth end of the tubing I attached a small, compact wad of elastic lamb's-wool, rolled in iodoform gauze, and, drawing upon the nasal end, I slipped the wad into the post-pharyngeal space and stretched the tubing until the cessation of all trickling of blood down the post-pharyngeal wall showed that the post-nasal aperture was occluded. Still keeping the tubing tightly drawn to its fullest extent, I rapidly packed the interior nasal recesses with long strips of iodoform gauze to just within the nostril, all around the tubing. I now tied a knot in the rubber, close to its exit at the nostril, and through it passed a cross-piece of tubing of somewhat larger calibre, just long enough to fit easily inside the nostril. Finally, releasing the end of the rubber, its elasticity caused it to fly back, so that the knot and cross-piece rested upon and firmly held in place the anterior gauze-packing. The nasal cavities were thus firmly occluded at both outlets, without any external evidence of the tampon, or any unsightly bulging of the soft parts of the nose. The elastic tubing was at just a sufficient tension to support the packing without the least discomfort to the patient. After forty-eight hours it was easily removed, without recurrence of the hemorrhage, by slightly drawing the knot out of the nostril and cutting the tubing just behind it.—*Med. Rec.*

PHYSICAL EDUCATION IN RELATION TO MENTAL DEVELOPMENT IN SCHOOL-LIFE.

BY THOMAS MORE MADDEN, M.D., F.R.C.S. ED.*

The respective claims of physical and mental training, and the evils arising from neglect or abuse of either are obviously questions of the highest medical as well as social interest. This neglect now presents itself in two different aspects. On the one hand, the children of the poor in England are compulsorily subjected at an absurdly early age, to a forcing and injurious system of mental cultivation. Whilst on the other hand, in the case of those of a better social position, the physical powers are not uncommonly overstrained, at the expense of the mental faculties. Of these errors, the former is the most important, and to its operation is, I believe, largely ascribable the apparent diminution of physical stamina observable in too many of the youth of the present day as compared with the physically more robust, if intellectually less cultured generation of the pre-educational period. Looking at the over-tasked and anæmic little children now chained to the desk by the School Boards, we might be tempted to believe

> " 'Twas not the sires of such as these
> Who dared the elements and pathless seas;
> But beings of another mould—
> Rough, hardy, vigorous, manly, bold !"

At the present time, a large part of the first ten

* Abstract of a paper for Section Diseases of Children —British Medical Association, Birmingham, July, 1890.

years of life, which should be primarily devoted to physical and moral training, is given up to the development of the mental powers: the child, when a mere infant, being compelled to attend some school, where the immature brain is forced into abnormal and disastrous activity. On its return home, jaded in mind and body, to prepare for next day's task, such a child is necessarily unfit for the enjoyment of the physical exercise which is essential for its bodily development and health, or for its still more important elementary training of the affections and moral faculties and instilment of religious principles, which are better acquirable from home teachings than from any School Board system. We are all, of course, agreed as to the duty of properly educating children so as to fit them mentally and bodily for the increasing requirements and competition of modern life. But as to the extent to which the former should be carried and the latter neglected in early childhood, there is unfortunately a great discrepancy between the rulers of the Educational Department and the views of those who have to deal in disease with the consequences of the violation of the laws of nature. And hence, whilst little children are thereby over-worked into disease or death, the physician must still raise his protesting voice, albeit it would apparently seem unheeded.

During the first eight or ten years of child life, the amount of mental cultivation which its brain is capable of receiving with permanent advantage is much less than is commonly believed. No greater physiological mistake is possible than that of attempting any considerable degree of such culture until the sufficient development of the physical stamina and moral faculties is accomplished. The organ of the mind is as much a part of the body as the hand, and ere either can function properly, its vital force must be fostered and maintained by nutrition and developed by physical exercise. A large proportion of those who come within the provisions of the Elementary Education code are semi-starved children of the poorest class, who, when thus debilitated by privation, are necessarily as much incapacitafed for any mental strain as for the accomplishment of any herculean feat of physical strength; it being not less inhuman, injudicious, and impolitic to expect the former than it would be the latter from those so circumstanced.

If the State, for reasons of public policy, determines that all children shall be compulsorily educated from their earliest years, it should certainly afford the means by which this may be least injuriously and most effectually carried out, by providing food and physical training as well as mental education for every pauper child attending an Elementary school.

Among the results of over-pressure in such schools under the Boards referred to, are brain diseases in all forms—viz., cephalitis, cerebritis and meningitis, as well as headache, sleeplessness, neuroses of every kind, and other evidences of cerebro-nervous disorders. On no other ground can the increasing prevalence of these affections amongst the little victims of the Educational Department be accounted for or explained, than by ascribing them to the new factors "brain excitement" and "over-pressure," which, in the case of young children, are now too commonly disastrously associated with the process of misdirected education and neglected physical training.

In connection with the physical management of childhood, I may add a few words on the abuse of alcoholic stimulants. The evils resulting from the abuse of alcohol were never so prevalent as at present, and are traceable in the diseases of youth as well as in those of adult existence. The results of this acquired or inherited alcoholism are brought under clinical observation in the form of cerebral, gastric and hepatic disorders, and especially cirrhosis of the liver, which as well as the protean forms of cerebro-spinal disease, and the various neuroses so frequently noticed in hospitals for children, and to which I have elsewhere directed attention. In the majority of these cases of juvenile alcoholism that have come under my care in the Children's Hospital, Dublin, this tendency appears inherited and most marked in those whose mothers were inebriates—intemperance in women also bearing in other ways on the diseases treated in hospitals for children, where its effects are strikingly evinced by the moral and physical deterioration of the offspring of the drunken and by their special predisposition to strumous, tubercular and other constitutional taints.

Under no circumstances should alcoholic stimulants be given to children, save in the guise and defined doses of other remedial agents—my experience in hospital and private practice, at home and abroad, having amply confirmed the view expressed in a work of mine published many years since, viz., that it is physiologically wrong, as well as morally unjustifiable, ever to allow a healthy child to taste alcohol in any form.—*Southern Med. Rec.*

DENTITION.

Though a physiological process, dentition is often attended with so much pressure and hyperemia as to cause both local and general symptoms. Some infants, indeed, get their teeth so easily that there are no signals of discomfort to herald their coming, but this is not the rule. The earliest local token of teething is a marked increase in the salivary and mucous secretions of the mouth. Until after the third or fourth month the salivary glands are almost inactive, but as soon as, or even before, dental activity begins, the mouth becomes full of

fluid, which, as the infant has not yet wit enough either to swallow or eject, slavers over the chin and front of the chest. When the tooth has come through, the drooling becomes less, but increases again with a renewal of active dentition.

Fever is a frequent attendant on teething. It may be slight and of little account, but not seldom it is so high as to cause apprehension of danger. Perhaps its most distinguishing feature is its erratic course. It comes and goes regardless of the rules that ordinarily govern febrile movement. It may last but for a day; it may continue for many days; it may come and go several times before the teeth that caused it have erupted. The morning temperature may be as high as, or higher than, that at the close of the day.

Prominent among the phenomena of dentition are those that indicate an irritable and highly impressionable state of the nervous system. Unusual fretfulness; fits of screaming; eyes half opened and rolled upwards in sleep; night-terrors; obstinate wakefulness; jerkings of muscles; squinting; carpo-pedal spasms;—these and other like phenomena show that the "nerves are set on edge," and are not infrequently the forerunners of general and alarming convulsions. In the hot months the most common and troublesome concomitant of teething is an intestinal flux. It is doubtless, so far as the teeth have to do with it, a result of reflected irritation. In summer it is the constant menace of the whole infant population, especially of bottle-fed babies in cities. Very often there is gastric as well as intestinal irritation, and the vomiting may be as annoying as the diarrhœa. Occasionally the onset of the disorder is so abrupt and the symptoms so violent and unrelenting, that it is properly called cholera infantum. In these, and even in cases that are less severe, there is extreme thirst and restlessness and rapid wasting. In cold weather the air tubes are much more likely than the bowels to receive the brunt of the reflected irritation. During dentition many infants are extremely sensitive to drafts and temperature changes. Another cause of taking cold is in the wetting of the clothing over the chest by the copious drooling. For these reasons, a "tooth cough" is extremely common in damp and wintry weather.

Less frequently than diarrhœa or bronchial catarrh is a disordered urination due to dentition. It may show itself under different forms. There may be a constant desire and effort to empty the bladder when there is nothing in it, or a spasmodic retention, or an annoying dribbling from incontinence. These symptoms will not often continue for more than a day or two at a time, but they may recur again and again before the teeth that caused them have erupted.

Now and then there is a troublesome otalgia, apparently the result of a reflected irritation, or an acute coryza, as shown by snuffling, sneezing, and red and watery eyes. In other cases the irritation expends itself in a surface eruption of eczema, or erythema, or urticaria, especially about the face and scalp—the "tooth rash" of nursery talk.

In regard to treatment Dr. Plant says: Having local and general symptoms, there must also be local and general treatment. When the drooling is copious, saturation of the clothing over the bosom should be prevented by a slavering-bib covered with rubber cloth or other impervious material. An over-secretion of saliva may be restrained by belladonna. As little as a drop, or even a half drop, of the tincture once in four hours may do as well as more. A teething child likes to press its gums against hard substances. The rubber ring now made for the purpose answers it better than the bit of wood or the coin of my infant days. The pretzel does very well also.

Until recently it was thought to be the most important part of the local treatment to cut the gums. It is now known to be needless and useless in nearly all cases, and possibly because of that it has fallen into an unmerited desuetude. Though it is rather the fashion now to condemn the use of the gum-lancet altogether, Dr. Plant is of the opinion that when a tooth is nearly through and the gum is seen to be tense over it, a free cross incision may liberate the crown and give quick relief to a suffering child. I would advise you not to use the lancet for a simple elevation of the gum, for that is no sure indication that the crown is near the surface. Such an appearance may come and go several times before the tooth has erupted; in fact, we may never safely predict the speedy cutting of a tooth unless its sharp edge can be felt beneath the gum. If there is gingivitis, scarifying the gum by light touches of the lancet will lessen the hyperemia and afford some relief.

For feverishness, nervous erethism, and fretfulness the bromides will render good service. From two to five grains in solution with syrup flavored with peppermint or winter-green, may be given and repeated as may seem necessary. If the infant is overwakeful an equal quantity of chloral may be given in similar solution. Aconite he recommends in *small* doses, repeated often. He puts from five to twelve drops of the tincture in a full goblet of water, and gives a teaspoonful every fifteen minutes for two hours; then every hour.

It must not be forgotten that a profuse diarrhœa with dentition is as exhausting and as certainly fatal, if not checked, as though due to any other cause. So, if the movements should exceed three or four in the day, they must be controlled.

In convulsions, if there is a tense gum over a crown that can be plainly felt or seen, there can be no harm in making a crossed incision through it. Very generally, however, other treatment will be needed, as the hot bath and the bromides,

with or without chloral. When there are threatenings of convulsions Dr. Plant treats them with a light dose—one to three grains—of calomel, or hydrargyrum cum creta— two to five grains—with about the same quantity of powdered rhubarb, or followed after some hours by a dose of castor oil or castoria. Besides that, he gives one of the bromides in such doses and at such intervals as may be necessary to control the convulsive tendencies.—Dr. Wm. T. Platt in *Arch. of Ped.*

ARTIFICIAL INOCULATION AND PULMONARY CONSUMPTION.

In an address delivered before the Pennsylvania State Medical Society, at Pittsburgh, Dr. Thomas J. Mays discusses the relation between artificial inoculation and pulmonary consumption. The substance of his contention is that the transmissibility of tuberculosis by inoculation, which, since Villemin's experiments in 1865 is incontestable, does not afford any sure ground for regarding the disease as contagious, and that the clinical evidence is against the theory of contagion. We agree with Dr. Mays that if the doctrine of the contagiousness of tuberculosis be false, then those who drive it to extremes "perpetrate a terrible wrong on those who are afflicted with this disease, and also waste the time and energies of the people by misleading them in regard to the true nature, cause and prevention of consumption." No doubt those who maintain the contagionist view take upon themselves a heavy responsibility; but it would be idle to deny that this view has received an immense impetus since Koch's discoveries and that over a large part of the world it is coming to be regarded as axiomatic. Perhaps the very facility with which this doctrine is accepted and carried to its legitimate issues by many who cannot profess to have subjected it to any adequate testing is a good reason for hearing an advocate of the opposite school, like Dr. Mays, who does not hesitate to declare that "he who takes a calm and impartial retrospect of the whole situation must own that never was an *ignis fatuus* pursued which left more promises broken and greater anticipations unfulfilled than this bacillus theory, so far as it stands related to the prevention and treatment of pulmonary consumption." We have ourselves often taken occasion to point out that it is one thing to admit—what we regard as certain—that the bacillus is the essential factor in tubercle, but quite another thing to acknowledge the efficacy of the so-called germicide remedies. These remedies have certainly had a fair trial and have had the patronage of many distinguished men, but we fear the ultimate fruit from them has been mainly disappointment and disaster.

Dr. Mays is very emphatic in his contention that this question of the contagiousness of phthisis must be determined by clinical evidence, and not by laboratory experiments. He asks confidently, What are the facts? and any clinical evidence on the subject will be very welcome. Some of his points are as follows: That physicians, though constantly associated with phthisis, are not prone to it, and suffer less than butchers, coopers, locksmiths, and others, who only come in contact with the disease by accident; that the Brompton Hospital did not afford a single well-authenticated case of contagion in thirty-six years; that Dr. Furbringer's statistics of the Friedrichshain Hospital at Berlin show that during sixteen years out of 459 nurses only 4 became phthisical (two of whom were tuberculous on entering), while of 339 female nurses only 2 became affected. Dr. Mays does not seem to be aware of Cornet's statistics, which are diametrically opposed to his. He gives the statistics of Dr. Brehmer, to the effect that at Görbersdorf since the establisment there of the well-known sanatorium for phthisis the mortality from phthisis has not increased, but has actually notably diminished in the village, in spite of the continual presence of large numbers of phthisical patients.

Perhaps the most interesting and valuable of Dr. Mays' statistics are those which relate to the contagiousness of phthisis between husband and wife. These are given on the authority of Dr. Schnyder of Switzerland, who records 844 cases of phthisis occurring among married people. In 445 of these the husband only, and in 367 the wife only was phthisical, while in 32 both husband and wife were affected, showing that in 812 cases there was no proof of contagion. As regards the remaining 32 cases, Dr. Schnyder denies that there was any proof of transmission, some of them having been affected at the time of marriage. The late Dr. Flint gives the history of 670 cases of phthisis which affected husbands and wives, among whom there were only five cases in which there was a reasonable suspicion of transmission. M. Leudet gives the cases of 112 widows and widowers whose consorts died of phthisis, and of these only 7 became subsequently phthisical. Dr. Mays also gives the well-known results of the collective inquiries organised by the British Medical Association some years ago. Of 1078 answers to the query whether the observer had noted any probable cases of the transmission of phthisis there were 778 answers in the negative, 39 doubtful, and 261 affirmative.

These figures are worthy of every attention, and are encouraging as tending to prove that if phthisis be contagious it is only very feebly so, and that any panic on the subject, or any language likely to excite the public mind unduly, must be steadily depreciated. But we know the fallacy that often lurks in an apparently imposing array

of figures, and the practitioner who believes he has seen a few cases of the transmission of phthisis will hardly be shaken in his conviction by any amount of negative evidence.

Dr. Mays dreads the effects that might follow if the belief in the contagiousness of phthisis were to prevail widely. He informs us that in the city of Naples for a period of sixty-six years (from 1782 to 1848), owing to the prevalence of this belief, the most rigorous measures were introduced for the suppression of the disease; that the ceilings, walls, floors, and windows of rooms were consumptives had died were torn out, the bedding and furniture destroyed, and the houses rendered uninhabitable, that the families of the patients were shunned and driven to want, and the patients themselves regarded as public pests. The result of all these rigorous measures was that the disease remained as prevalent as before.

At the present time when old ideas have been roughly shaken, and new ideas are hardly established on a very secure foundation, it is no easy matter for the thoughtful practitioner of medicine to say what attitude he ought to assume towards the question of the contagiousness of phthisis. He feels that he is not free to ignore the new light that has been shed upon the pathology of the disease, and that, on the other hand, while the clinical evidence of contagion remains so inconclusive, it is a very serious thing to teach his patients a doctrine so distressing to themselves and to their friends—a doctrine, further, that has proved of little or no value with regard either to prevention or cure. A dogmatic attitude is hardly yet possible; but we are at least safe in discountenancing panic while appproving of reasonable precaution, and we must heartily welcome any evidence tending to throw light on a subject which is of such vast practical importance.—*Lancet.*

A SUCCESSFUL CANDIDATE FOR THE L.R.C.P. LOND. DIPLOMA INTERVIEWED.

In an article headed "Whoo-oop! A Medical Student Passes an Examination at the Pavilion," the *Star* gives the following report of an interview with a student who is said to have been successful at the recent examination held by the London College of Physicians. It may be that the writer has drawn slightly on his imagination in filling up the details, but any one who has passed through the ordeal at the "Hall by the Sea" will admit that the chief outlines of the story must have been communicated to the *Star* man by one who has been there. The observations about the clinical part of the examination are worthy of particular attention as they refer to a weak point in the examination, and one of which we are constantly hearing complaints from provincial students. A student, say of St. Bartholomew's, who happens to have a friend studying at Guy's and the London or University College hospitals, may easily make himself acquainted with particulars of all the cases he is likely to meet with in the clinical part of the examination. It is a great joke when a student is asked to diagnose and give his views generally as to treatment, etc., of a case which he has seen again and again. He approaches the suffering individual with well-affected and curious interest, examines the abnormality in the most professional manner and with the greatest care and patience. After considerable reflection he diffidently ventures to give his diagnosis, which the examiner (who evidently expected a different answer, for the case is one of considerable difficulty, and an experienced physician might well have been excused for making a mistake) cheerily pronounces to be "Quite right." And now for the story of the "Whoo-oop":—

It was at the Pavilion Music Hall the other night that a *Star* man came across a young man with a checked suit of striking pattern, a ruddy face beaming with delight, a big stick, and spirits at boiling point. After each item of the performance he knocked his big stick vigorously on the floor and shrieked "whoo-oop," with all the force of his big broad chest. "Whoo-oop" seemed to be the one expression that relieved the bubbling feelings within him, and after a little time he began to discharge himself of it with increased vigour, and without any reference to or occasion of anything that was going on upon the stage. Then he asked half-a-dozen strangers about him to drink, paid for a cigar for a waiter, shouted "Whoo-oop" again with extra fervor just as Jenny Hill was coming on, brought down his big stick with a thundering smack on a marble counter, and was touched on the shoulder by a six-foot commissioner; "You see that door?" said the chucker out. "Oh, I can see it all right, old chap," said the young man. "I can see two of them. What about 'em?" "Well, that's the door you're going out of if you don't knock off with that stick." It did not affect the young man's humor. He beamed all over his face, and asked, "Are you the chucker out?" "I am, sir." "And do you want to chuck me out?" "No, sir; not if you behave yourself." "Well, do you see that glass?" "Yes." "What will you have in it?" The six-foot commissioner turned away with a grin, and the other remarked confidentially to the total strangers around him, "It's all one to me whether they fire me out or whether they don't. They can't alter my getting through, and I don't care. I've just wired home to tell them that I've passed in the first division in all subjects, my "stifcats" coming on in the week after next, after the council meeting.

"What is it you have got through?" asked the *Star* man. "What is it I've got through? Why, my little L.R.C.P., of course. I circumvented the beggars this time. They tried all they knew on me, but I'd got 'em clean beat. They knew they were done as soon as I'd tackled my written."

"What's that?"

"Why, my written paper. I did that the day before yesterday down at the Examination Hall, on the Thames Embankment, you know. As soon as I looked through the questions I knew I'd circumvented 'em sure. I did a champion record on my little written. I answered all the questions, handed in my paper, and was outside talking to the porter an hour and seventeen minutes and eighteen seconds before the next man came out. I timed it with my little watch, and waited to see. I asked the porter if he didn't reckon it was a champion performance, and he said it was the quickest he ever heard of. I gave him half a crown. I knew I'd circumvented 'em this time. You should just have seen the look on the examiner's face when I handed my paper in. He pulled his gold watch out and looked at the time, and couldn't believe his eyes. He looked as savage as a mad dog, but I didn't care how he looked. I knew I circumvented him, and that was good enough for me."

"Do you think he didn't want you to pass, then?"

"Of course he didn't. Examiners, they're the savagest lot you could possibly name. I've always had my knife into examiners ever since my preliminary. They're a moderate lot, take 'em all round. They don't know a lot themselves. Half of 'em couldn't tell a case of cirrhosis of the liver from a crick in the neck, and they're that savage to think you know a lot more than they do that they try all they can to fog you. But I've circumvented 'em this time."

"Have they circumvented you many times?"

"Cruel. This makes three times I've been up for my little L. R. C. P. First time referred for three months; second time when I made sure I'd done all right, I'm blessed if they didn't go and refer me for another six months. But, besides that I've been referred before on all the subjects you can mention. I know every station on the road up to London, through coming up so many times to be examined."

"You come from one of the provincial schools, then?"

"Yes. You see the London students have a big pull over us, especially in the clinical."

"How's that?"

"Well I'll tell you. You see, when you go up for your clinical they get a lot of cases out of the hospitals—the hardest cases they can think of, and they get 'em there lying in bed, and try all they can to fog you over there. Well suppose a chap's at Guy's; he is very likely seen one or two of the cases he's examined about every day in the hospital. Or very likely he's heard about 'em. Why, one chap was being taken in his clinical by old Duckworth—Sir Dyce Duckworth—you know him; and the first case he's taken to he looks at the chap's face and he knows him in a minute. He'd seen the case every day for weeks, and knew a dashed sight about than him than old Duckworth did. So he just reels it of like a book, and every question Sir Dyce puts to him he answers. So Sir Dyce takes him on to another case in another bed. And as soon as he saw the case he recognized this one just the same. He'd got it all off by heart, and old Duckworth couldn't fog him any road. So they go on to another bed, and when the chap looked he thought he was done sure for it was some strange case they'd got in, and he couldn't make head nor tail of it anyhow. He could see old Duckworth mean't doing him this time, so he tries a game on. When Sir Dyce says, 'Well, what's the matter with him?' the chap don't cave in. Not he! He says as bold as a lion, 'I feel bound to tell you, Sir Dyce.' 'Well?' says Sir Dyce. 'I feel bound to tell you that I've seen that case in hospital!' When he said that it fairly knocked old Sir Dyce off his perch. He says, 'that's very honest, very honest, very honest;' and goes and signs him through the first division. We can't circumvent 'em that way, because they never bring any cases up from Birmingham or Leicester (? Manchester) and the London chaps have all the pull of us."

"You managed your clinical all right?"

"Circumvented 'em completely. First case I had was a hob-nailedl liver, and I knew it all backwards, and other cases just as well. I went a bit rocky, though, on my little *viva voce*, but I managed to dodge 'em. When I went in there was a chap sitting at one end of the table with a lot of sections of brain before him, and another at the other end with liver. I'm weak on brain, but I'm particularly strong on liver, especially hob-nailed ones. So I went to the liver end of the table like a knife. You have to be artful with those chaps you know, and I was artful with mine, I pinned him on liver. Whenever he showed any signs of getting onto any other subject I kept saying something that made him want to ask another liver question. So I circumvented him that way. I've done with the old Examination Hall now. I'll bet my case of instruments to nothing that they never see me down there any more. See that gum lance. That's a nice bit of workmanship that is. Real tortoiseshell the handle is, and you just feel the edge with your thumb and see how sharp it is. You haven't got a gumboil or anything I could lance for you? Let me put my hand between your shoulders. Now draw a full breath, and say 'Ninety-nine.' Now lean forward and say 'Ninety-nine' again. Now say

'One, two, three!' You've got a very curious vibration, very curious. I should like to sound you if I'd got my little steteoscope with me."

"You're fully licensed to kill now?"

"Oh, yes. I'd got my College of Surgeons, before, you know."

"Was this a difficult examination?"

"The hardest on record. In the written they put one very artful question. It was to describe the post-mortem signs in a case of drowning as distinguished from a case of ordinary suffocation. I tumbled to that. Of course, in a case of drowning the body would be wet. I had 'em there."—*Hosp. Gaz.*

TOBACCO AND WHISKY AMBLYOPIA.

The long-continued use of either tobacco or whisky so saturates the system with poisonous materials as to blunt the parts concerned in the act of vision, so that they fail to perform their proper functions. The result is that vision fails in proportion to the obtunding of the seeing parts of the eye. Light in such cases ceases to excite the normal stimulation; consequently, all objects appear to be enveloped in a more or less dense fog or mist. It is a functional failure to see because the seeing parts, blunted by nicotine or alcohol, or both, fail to receive sufficient stimulation to complete the act of vision. It is strange that nicotine and alcohol, when used to excess separately, should produce exactly the same blunted condition of the visual organs. When used jointly of course the result is the same. Each one must be used excessively for a long time before the vision begins to fail. Then the failure is always quite gradual—never sudden. In such cases no organic disease of the interior of the eyes can be discovered. That is as it should be since the trouble is essentially functional. Occasionally the optic nerves look a little redder than normal; than again a little whiter than they should be.

A case I examined last week forcibly reminded me of the deleterious effects of tobacco and whisky on the vision.

A gentleman, about 60 years old, in perfect health, and had been so all his life, stated that he could barely see to get about; could not read nor write, and could not find any glasses that would improve his vision to any extent. He was naturally anxious to know what was the matter. His vision began to fail several months ago and gradually got worse. The past six weeks he has been unable to read or write.

The examination revealed nothing abnormal either outside or inside of the eyes. Possibly the optic nerves were a little redder than normal, still that may be natural with him. His only complaint was: "I cannot see. What is the matter with my eyes?" I told him that there was nothing in or about the eyes that would account for the dimness of vision, and asked him about his habits. He answered about in these words: "My habits are regular. I eat and sleep regularly. I smoke the best cigars from the time I get up till I go to bed, except when I am eating. My smoking costs me much more than my eating. During the day I light a fresh cigar with the stump of the old one. I smoke about fifteen cigars every day, and I have been doing this for more than thirty years! I drink from three to four good horns of the best whisky every day and have been doing so for many years." "Hold up; that is enough!" said I. "You have tobacco and whisky amblyopia. These are the cause of your dimness of vision. The tobacco is the chief cause but the whisky no doubt has something to do in making you nearly blind. Your body is saturated with nicotine and alcohol. These have so blunted your visual organs that they fail to do their work. It is a functional failure. There is no organic disease. You have got to give up your tobacco and whisky entirely and your eyes will slowly come to and your vision will get good again. I advise you to quit gradually so it will not make you sick, but in the course of ten days to two weeks you must have both stopped. If you get too nervous, particularly at night, you had better take for a few nights some nervine, as hydro-chloral, or some similar remedy."

"*I will follow directions,*" said the resolute man, "and will see you later."

I like to hear a man with such confirmed habits talk this way instead of the sickly whining we usually hear in such cases. This man will give up his habits and his lost vision will gradually return to him. Fortunately he has not lost any of his naturally strong will power.

CHAUCER'S DESCRIPTION OF A PHYSICIAN.

The "father of English poetry" thus refers to the medical man of the fourteenth century:—

With us there was a doctur of phisike;
In all this world, na was there none like him
To speake of phisike and of surgerie,
For he was groundit in astronomie.
He kepte his patient a full great dell
In houses: by his magike naturell
Well couth he fortune the ascendent
Of his image for his pacient.
He knew the cause of every malady,
Whether it were of cold, heate, moist, or dry.
And where of engendered was each humour.
He was a very parfit practisour;
The cause I knew, and of his haime the roote,
Anon he gave to the rich man his boot.
Full ready had he his apoticaries
To send him drugs and his lectuaries;
For each of them made other for to winne,
Their friendship was not new to beginne.
Well he knew the old Esculapius,
And Diascorides, and eke Ruffus,

And Hippocrates, and Galen,
Serapion, Rasis, and Avicen,
Aberrois, Damascene, and Constantin,
Bernard, Galisden, and Gilbertin.
Of his diet measurable was he,
For it was of no superfluitie;
But of great nourishing and digestible.
His study was but lytyl in the Bible.
In sanguyn and in perse he clad was al,
Lined with taffata an with sendall;
And yit he was but easy of dispence.
He kepte that he won in time of pestelence:
For gold in phisike is a cordial,
Therefore he lovede gold speciall.

It appears from this quaint and satirical picture, that, in Chaucer's days, astrology formed part of a physician's study. It also plainly proves that a disgraceful collusion prevailed between medical practitioners and their apothecaries, mutually to enrich each other at the expense of the patient's purse and constitution. The poet, moreover, seems to tax the faculty with irreligion: that accusation was not uncommon; hence the old adage, *Ubi tres medici, duo athei.* Taffeta and silk, of crimson and sky-blue color, must have given an imposing appearance to this worthy gentleman, who, resembling many later doctors in his disuse of the Bible, resembled them also in his love of fees.—C. E. D., *in Hosp. Gaz.*

ENURESIS IN CHILDREN.

In the section on the Diseases of Children at the recent meeting of the American Medical Association at Nashville, in a very interesting discussion upon enuresis in children, Dr. J. P. Thomas, of Pembroke, Ky., said:

"Of course neither Dr. Gaines nor Dr. Perry Watson intend to claim any priority in the use of belladonna or its alkaloid, atropia, in enuresis or incontinence of urine. I have used them alternately for ten years, and the tincture of belladonna has been a stereotyped prescription by the profession for a decade or two. After quite an extensive experience for over twenty years with this trouble, only, however, in private practice, I have for the past five years had better results from the following formula than any other medication:

R.—Pot. bicarb., - - - - - - - ʒ j.
Ext. belladonnæ, fl., - - - ʒ xi.
Ext. Ergot, fl., (Squibb's) - - ʒ j.
Syr. Simplicis, - - - - - - ʒ ij.—M.

Sig.—Dose in proportion to the age of the patient, having reference to the dose of belladonna only.

When a persistence in this medication conjoined with nightly bathings of the prostatic region with a saturated solution of chloride of sodium in cold water fails, I invariably resort to circumcision in the mode which in my experience rarely fails to permanently cure the patient. I often perform circumcision with but little constitutional treatment, because I think that the early performance of this little operation is a duty every parent owes to his male children.

Though not an Israelite, I am convinced that the Mosaic law of compulsory circumcision should have been adopted by the Gentiles as a sanitary measure. It promotes cleanliness, which all admit is next in importance to godliness. It prevents the accumulation of the sebaceous secretion so often present in careless and uncleanly boys. It often prevents gonorrhœal contagion, even in the uncleanly. With my experience in practice among the Jews I have yet to be consulted by a Jew, young or old, to prescribe for a gonorrhœa, or see a Jew child with enuresis. However, my practice among this people has been comparatively limited, but this has been the observation—as given me—of several physicians who have had for years a large clientèle among the Jews, as to the rareness of gonorrhœa; and from personal knowledge and the much more extended observation of others, this unusual exemption from gonorrhœa is not the result of virtuous abstemiousness, or a higher standard of morality. As a rule the unmarried Jew is as promiscuous as to cohabitation as the same class of any other nation. The observation as to the exemption of the male Jew child from enuresis is only my own experience and in a limited field for observation—but I am of the opinion that incontinence of urine rarely afflicts these circumcised children.

It is only a suggestion that may lead to a study of the subject by some of the members whose opportunity for observation on this point is much better than mine. Though I have had frequent relapses after an apparent cure by this formula, and many permanent cures after a prolonged repetition of it, I am convinced that it will cure more cases than the belladonna or atropia treatment alone. The pot. bicarb. is a mild, but constant diuretic, which agrees with the observation of Dr. Hays, of Philadelphia, as to the use of diuretics in this disease. The ergot, either from capillary contraction of the arterioles or its known effect upon nerve centers, or both—seems to contribute largely to the physiological effect of the belladonna. In conclusion, I can only recommend this combination to the members of this section and request for it a fair trial. The object in this formula is to have nearly a saturated solution of the pot. bicarb.

THE USE OF WATER AT MEALS.

Opinions differ as to the effect of the free ingestion of water at meal times, but the view most generally received is probably that it dilutes the gastric juice and so retards digestion. Apart

from the fact that a moderate delay in the process is by no means a disadvantage, as Sir William Roberts has shown in his explanation of the popularity of tea and coffee, it is more than doubtful whether any such effect is in reality produced. When ingested during meals, water may do good by washing out the digested food and by exposing the undigested part more thoroughly to the action of the digestive ferments. Pepsin is a catalytic body, and a given quantity will work almost indefinitely, provided the peptones are removed, as they are formed. The good effects of water, drunk freely before meals, has, however, another beneficial result—it washes away the mucus which is secreted by the mucous membrane during the intervals of repose, and favors peristalsis of the whole alimentary tract. The membrane thus cleansed is in a much better condition to receive food and convert it into soluble compounds. The accumulation of mucus is especially well marked in the morning, when the gastric walls are covered with a thick, tenacious layer. Food entering the stomach at this time will become covered with this tenacious coating, which for a time protects it from the action of the gastric ferments, and so retards digestion. The tubular contracted stomach, with its puckered mucus lining and viscid contents, a normal condition in the morning before breakfast, is not suitable to receive food. Exercise before partaking of a meal stimulates the circulation of the blood and facilitates the flow of blood through the vessels. A glass of water washes out the mucus, partially distends the stomach, wakes up peristalsis, and prepares the alimentry canal for the morning meal. Observation has shown that non-irritating liquids pass through the "tubular" stomach, and even if food be present they only mix with it to a slight extent. According to Dr. Leuf, who has made this subject a special study, cold water should be given to persons who have sufficient vitality to react, and hot water to others. In chronic gastric-catarrh it is extremely beneficial to drink warm or hot water before meals, and salt is said in most cases to add to the good effect produced.—*Brit. Med. Jour.*

DEAFNESS TREATED BY PILOCARPIN.

After Mr. Field's communication in the *Journal* of May 17th, the following notes of a case of deafness treated by pilocarpin will not be without interest to the profession. I have made very careful observations daily, but as those of every third day clearly show the steady improvement that was made, for the sake of brevity I mention only these.

J. C., aged 13, has always had very imperfect hearing; when 5 years old was tested by Dr. McBride, and found able to hear a watch at only three inches from both ears. In January of the present year he had a very severe attack of measles, and after recovering from this was found to hear worse than before, namely, he could only hear a watch at 1½ inch. By means of Politzering this distance was increased to 3½ inches.

On March 13th he was taken to see Dr. McBride, and at his suggestion pilocarpin was injected daily, commencing on March 15th. The distances on the respective days being:

	Right.	Left.
March 15th ..	2½ inches ..	3½ inches.
" 18th ..	5½ " ..	5½ "
" 21st ..	9½ " ..	7½ "
" 24th ..	10 " ..	8½ "
" 27th ..	16 " ..	16½ "
" 30th ..	28 " ..	30 "
April 2nd ..	44 " ..	46 "
" 5th ..	48 " ..	48 "

The last injection was made on April 5th, there being in all 21 injections. The dose at first was one-twelfth grain, but this was soon increased to one-sixth, and later to one-fifth grain.

After stopping the treatment I examined daily for five days, the distance remaining the same. A month after this I again examined and found them not only to have maintained the improvement, but to be slightly better—50 inches from both ears. The power of hearing conversation is also very markedly improved, but not to the same striking extent to which his power of hearing a watch is.

The case is probably one of mixed middle and internal ear deafness, the bone conduction being much diminished. There were no unpleasant symptoms arising from the treatment.

Edinburgh. JAS. C. DUNLOP, M.B., M.R.C.S.
—*Br. Med. Jour.*

PHENACETINE IN WHOOPING COUGH AND BRONCHITIS.—If there is any remedy which will control a disease in a few days, which, if let to run its natural course, would last an average of ten weeks, it may be safely said that in one disease at least, science has accomplished something. Who has not felt, as he has seen the victim of whooping-cough struggling in its convulsive paroxysms, with its face purple, its eyes bloodshot, and its hands wildly thrown about in agony, the poverty of his art and his science for any relief it could bring to his patient. Scores of remedies have been introduced as specifics, and yet none have been more than partially successful. Possibly the new remedy, phenacetine, may share the fate of its predecessors, and yet we have seen such wonderful results from it in the catarrhal and spasmodic stages of whooping-cough, in the teasing and spasmodic coughs of bronchitis and laryngitis, we are led to hope that in this class of troubles it will yet rival quinine in its own specific field.

In a typical case of whooping-cough in a child eight months old, which had passed through its catarrhal stage and was well on in the second or convulsive stage, the paroxysms coming on every hour, of a violent character, the action of the drug was almost magical. Under the influence of grain and a half doses every three hours, the paroxysms in three or four days were reduced to half a dozen light ones during the twenty-four hours, and in a week had entirely disappeared. Another case was when the attack had not fairly entered the second stage, and yet the exposure of the child and the peculiarity of the symptoms left no doubt as to the character of the disease. In three days the cough had very nearly disappeared under the influence of two grain doses of the drug every four hours, and in a week's time he was able to return to school. In the schoolmate from whom the disease was contracted, the disease was two months in running its course. In both of these cases the vomiting speedily ceased and the appetite returned. Many other cases occur to us as we write, but the ones quoted above are typical, and will suffice to illustrate the prompt action of the remedy. A lady of middle age was attacked with a sharp pharyngitis, the inflammation, as it was relieved in the pharynx, extending down and involving the larynx and upper bronchial tubes. The expectoration was bloody and purulent, and the cough frequent and painful. In addition to the usual medication five grain doses of phenacetine was given at first every three hours, and as the cough subsided, every four or six hours. The effect was immediate; with the first dose the whole nervous system was quieted, the cough became less frequent, the temperature diminished, and in a few hours the patient fell into a quiet sleep. The improvement was rapid. There is no doubt the drug produces a very marked effect in relieving the irritability of the nervous system, and acting specially upon the vasomotor nerves, controls to a certain extent the circulation without any dangerously depressing action upon the heart. As an intercurrent remedy we have reason to believe that in many cases it will supersede opium and its alkaloids and the class of hypnotics of which chloral is the type, because it not only does not prevent, but aids its quieting power, the specific action of other drugs. We have been particularly pleased with the action of phenacetine in the epidemic of grippe through which we have just passed. In connection with other indicated remedies it has been in our hands of very great service.—*N. Y. Med. Times.*

THE TREATMENT OF HÆMORRHOIDS BY EXCISION.—Marcy (*Annals of Surg.*, November, 1889) advocates the following operation for hæmorrhoids: The large intestine is previously emptied, the patient is etherized, placed in the lithotomy position, and the sphincter paralyzed by means of digital dilation. The rectum is then washed out with a solution of corrosive sublimate, care being taken that none of it be allowed to remain. A pledget of wool dusted with iodoform is then placed in the rectum. Along the line of the junction of the mucous membrane with the integument division is made from the central line posteriorly from below upward on both sides to the median line above. This can be done with care without injury to the plexus of veins. The loose connective-tissue fascia is separated by the finger or blunt instrument quite deeply, cutting away connective-tissue bands which may appear. In a similar manner the mucous membrane is separated from the plexus. The plexus is thus separated from its surroundings, except at its base, and is tied off in the following manner: A needle with eye near the point, threaded with a tendon, is introduced posteriorly behind the mass and withdrawn; again threaded with the external end of the suture, it is carried about one-third of an inch from its first introduction, unthreaded, threaded with the opposite end, and withdrawn. In this way the entire base is encircled by a line of deep, double, continuous sutures. In this manner an even, continuous compression is secured, as the stitches are not drawn so closely as to produce necrosis, but simply to protect against hæmorrhage. The hæmorrhoidal plexus is now dissected away with scissors just above the line of sutures, and the mucous membrane is stitched to the line of division just made. For the latter purpose he prefers a running blind stitch taken from side to side, from within outward, so that no stitches are left in sight, and the divided edges are evenly and accurately approximated. The wound is then dried, dusted with iodoform, and protected by a thin layer of iodoform collodion. In uncomplicated cases absolute restraint in bed is not necessary, and micturition is usually voluntary and easy. The bowels may be moved on the third or fourth day.

The advantages stated for this operation over that practised by Mr. Whitehead are less hæmorrhage on account of the constriction of the vessels before division, less danger of secondary hæmorrhage, more accurate and easy closure and readjustment of parts, and the advantage which continuous animal sutures buried and incorporated into the tissues have over the interrupted silk suture, which is a foreign body, and, if not removed, must be thrown off by suppuration. He prefers a tendon from the tail of the freshly killed kangaroo, properly preserved and prepared, for these sutures, as catgut is often untrustworthy from inherent defects.

PERSPIRING FEET.—G. F. writes: If "Surgeon" will wear low shoes, wool socks, and dust the feet

over twice a day with iodol, he will soon have his feet as hard, sweet, and comfortable as he could wish, if "Surgeon" derives as much benefit from this plan of treatment as the writer.

. DR. JOHN ORMSBY (Dover) writes: "Surgeon" will find the following a never-failing remedy: Wash the feet at night with very hot water, put on white cotton socks, and immerse the feet, thus covered, in methylated spirit, poured into basin; wear the socks all night; they will soon dry in bed. During the evening wear cotton socks and common felt slippers, and keep the socks constantly saturated with spirit. In a week the cure will be complete. The best ventilated boots are made of stout canvas, such as is used in tennis shoes, tan or black. They can be made in any fashion, and will be found a great comfort.

AN OLD MEMBER recommends "Surgeon": R Liq. plumb-diacet., acid. carbolic. āā ʒij; aq., ad. ʒij. M. One teaspoonful to be mixed with a pint of warm(ish) water, and the feet washed every morning and dried with a soft towel.

MR. ALFRED E. BARRETT, M.R.C.S., Eng., etc. (Holland Park, W.), writes: If your correspondent "Surgeon" will wash the feet night and morning with soap and water, and, after careful drying sponge them over with the following lotion, he will find relief: R Plumbi acet. ʒj; acet. distill. ʒj; sp. vini methylat., ʒij; aq. ad. ʒxvi; S. ft. lotio. I have found this so efficacious that I use no other treatment. It will be found mentioned in the *Journal* for October 30th, 1880. Shoes are preferable to boots, but whichever are used I recommend those of buckskin, which is very soft and easy to the feet. I get them from E. Irons, 140 High Street, Notting Hill, who makes a specialty of them, and his ingenious method of ventilation would probably suit your correspondent. The inner sole has several perforations communicating with the outer air by a tube in the heel. Patients have experienced the greatest comfort from the use of these boots.—*Br. Med. Jour.*

TREATMENT OF DYSENTERY BY ENEMATA OF CORROSIVE SUBLIMATE, ETC.—It is now generally recognized that certain morbid conditions of the intestinal tract may be favorably modified by various drugs belonging to the class of antiseptics, among which the chief are calomel, bismuth, naphthalin, and thymol. It is a noteworthy fact that these substances are insoluble, and it is in virtue of this property that they are enabled to run the gauntlet of the absorbents and exert their specific action upon the intestinal contents. The best of all antiseptics, corrosive sublimate, has thus far been of little use for the purpose mentioned, because it was supposed that no benefit could be exerted by any but a lethal dose. While this may be true of its administration *per os*, it is shown by G. Lemoine (*Bull. gen. de Thera.*, January, 1890), to be a mistake so far as concerns administration *per rectum*.

Lemoine has treated fifty-four cases of dysentery by enemata of corrosive sublimate, and with the happiest results. The strength of the solution was one to five thousand, of which two hundred grams were administered three times a day; later, two hundred grams of a solution of one to three thousand were injected twice daily. Improvement showed itself, as a rule, after the first injection, the first symptoms to disappear being the tormina and tenesmus. In a certain number of cases the tenesmus was so great that the enema could not be administered without a preliminary treatment, which consisted in painting the sphincter with a five per cent. solution of cocaine.

In acute cases a cure resulted from this treatment in from three to four days; whereas, in the more chronic cases which presented themselves for treatment on account of an acute exacerbation, a cure was effected, as a rule, in one day. The latter statement is somewhat startling in view of the well-known fact that chronic dysentery is decidedly rebellious to all the usual modes of treatment.—*Med. News.*

THE TREATMENT OF RETENTION OF MEMBRANES (*Zeit. f. Geburts. u. Gynak.*)—The causes of retention may be irregular or inefficient contraction of the uterus, inopportune procedures for the removal of the afterbirth, or pathological changes in the histological structure of the fetal membranes. Among the latter, pathologico-anatomical alterations in the various sections of the decidua are probably the most active. Retention may lead to hemorrhage, or it may cause decomposition. If larger or smaller placental pieces remain behind, bleeding occurs as a necessity; decomposition may occur, but not necessarily. If membranous portions remain behind, they do not of themselves produce hemorrhage, not being in direct vascular connection. If the retention be at once followed by bleeding, the latter is due to the bad or inefficient uterine contractions which caused the retention. Many consider the retention of portions of the ovisac within the uterine cavity as innocuous. Kaltenbach, supported by Döderlein and Winter, bespeaks the absence of germs in the cavum uteri as a cause, and declares that the retained product only undergoes decomposition on the entrance of germs from without, or when a portion projects into the vagina; for this reason we need not remove the uterine portion, contenting ourselves with the cervical or vaginal segments. Care should be taken to keep the vagina thereafter as aseptic as possible. Kaltenbach has practised this method for over five years with invariable success. Eberhart favors a rigid prophylaxis. If the placenta be expressed only after the characteristic signs of completed separation are apparent (flattening of

the uterus antero-posteriorly, elevation of the fundus with good contractions, further expulsion of the cord), retention will only be observed in pathological changes. The expectant plan is followed; that is, the placenta is expressed only if from one and one-half to two hours have passed without it being spontaneously expelled.

If now retention has already taken place, the uterine portion is undisturbed; only that projecting into the vagina is removed by inserting two or three fingers; the uterus is never entered. Ergotin preparations are given to hasten the separation of membranes.—*Am. Jour. of Obstet.*

Successful Operation for Actinomycosis.—Dr. Matlakowski of Warsaw reports an interesting case of actinomycosis in a man which was successfully eradicated by operative measures. The patient, who was engaged in agricultural pursuits, was forty-six years of age, and had noticed for six weeks a rounded, movable tumour, which did not cause him any pain, under the angle of the jaw on the right side. He had been loosing the teeth for the last fourteen years, they having fallen out without being carious. The last tooth in the right lower jaw had fallen out a year before. The tumour kept on increasing, and a week before admission a small abscess had broken. Not only was there no pain, but there was no difficulty in opening the mouth or in swallowing. When first examined, there were two fistulous openings near the angle of the jaw, but a probe passed into them did not penetrate at all deeply, and could not be made to reach the bone; a considerable quantity of blood exuded in consequence of the probing. The discharge was scanty, and looked like boiled sago mingled with blood serum. The molars and canines were all wanting in the lower jaw on the affected side, the gum, which was healthy enough, having grown over their alveoli. The ray fungus having been found on microscopical examination, and there being a complete absence of any signs of disease elsewhere, an operation was decided on. Ample incisions having been made, parts of the masseter, digrastric and sternomastoid, and the whole of the mylohyoid muscles were excised, together with the entire submaxillary gland and the lower part of the parotid, also the bridge of salivary gland substance connecting the two glands. A large number of arteries and veins had to be ligatured. At first the patient experienced some difficulty in swallowing, and in expectorating a quantity of tenacious and somewhat sanguinolent mucus, for the existence of which no physical cause could be found by examination of the lungs. However, after a time all these difficulties passed off, and the wound, which was of course a large gaping cavity in consequence of the quantity of tissue that had been extirpated, granulated up and healed over. Two years and a half afterwards, Dr. Matlakowski obtained information that the patient continued in good health.—*Lancet.*

Thiersch's Method of Skin-Grafting.—Dr. Ivan Fomin, of St. Petersburg, reports eighteen cases in which he used Thiersch's method of skin-grafting (*Vratch*). The author carried out the method as follows:—The surface of a crural ulcer, for example, is dressed with compresses wrung from a 1 to 5000 solution of corrosive sublimate until complete cleansing of the granulating surface has taken place—usually in from three to seven days. On the day of the operation the entire limb is washed with soap and water and an antiseptic lotion, after which a springeful of a 4 per cent. solution of cocaine is injected in the neighborhood of the ulcer, and the latter is carefully scraped away with a sharp spoon, down to the muscle or fascia. After this a bandage to arrest hæmorrhage is applied and left in place for from half an hour to two hours. Next, thin cutaneous strips, measuring about five or six inches in length and two and a half in width, are sliced, with a sharp razor, usually from the patient's arm, which should have been thoroughly disinfected. This step of the operation may be rendered painless by giving a hypodermic injection of cocaine. The strips are then moistened with a 1 per cent. solution of carbolic acid and placed on the ulcer, not only the entire surface being covered, but the healthy skin slightly overlapped. The grafts are then carefully dried with absorbent cotton, dusted with a thin layer of iodoform, and covered with fenestrated strips of protective, which overlap each other like tiles. The whole is then dressed with antiseptic material and the limb immobilized.

The results obtained by Dr. Fomin are excellent—even most extensive and obstinate ulcers healing in a few weeks.—*Annals of Surgery.*

The Sting of the Honey Bee.—Will you kindly allow me to say a word or two about the sting of the honey bee? A few days ago I was told by a gentleman of the highest veracity, who as a matter of pleasure keeps bees, that in consequence, he believes of previous inocculation by bee stings, he is proof against pain, that is, he does not feel pain when stung by the insect. Fifteen years ago, when this gentleman began his favorite pursuit, he suffered severe pain in the parts stung, but for several years past the sting of the bee has produced only a little pleasurable sensation, which continued for a few seconds and then ceased. I may say that the gentlemen is not pain-proof against the sting of the wasp, for, when stung by one of these formidable insects a short time since, his sufferings were acute and prolonged. But it might be that after a few repetitions the sting of the wasp might cease in him to produce its stinging effects. I therefore made the sugges-

tion that, for the sake of science, he should take the matter up and thoroughly investigate it, in order that he might discover whether he could not also fortify himself against the pain caused by the sting of the wasp. This he declined to do, his thirst for science not being sufficiently great to induce him to have any further intercourse with a wasp if he could help it.—WM. O'NEIL, M. D., in *Lancet*

THE HOT WET PACK IN THE TREATMENT OF ECLAMPSIA.—Dr. Barton Cooke Hirst looks upon the hot wet pack as a most valuable agent in the treatment of puerperal eclampsia. Cases apparently hopeless under other methods of treatment ofttimes yield to the profuse diaphoresis following a hot wet pack. The pack is to be given by wringing out four blankets in hot water, surrounding each lower extremity, the trunk under the arms, and finally the trunk and arms with the hot, moist blanket, first slipping under the patient a rubber sheet, and afterwards tucking a couple of dry blankets over the whole, the head being kept cool by cloths dipped in ice-water. The sweating thus induced was profuse, and no doubt carried off the greater part of the poison in the blood. The hot wet pack treatment Dr. Hirst thinks preferable to any other. Chloral and bromide of potassium, which lessen muscular action and dull sensibility, can be but temporary makeshifts until the more important object of treatment is obtained.—*Univ. Med. Jour.*

HYDRASTININ IN UTERINE HEMORRHAGE (*Arch. f. Gyn.*)—The author has used this drug with success in cases of congestive dysmenorrhea, bleeding from the virgin uterus, essential bleeding, hemorrhage from diseased condition of the uterine tissue (endometritis, metritis), from parametritis, pyosalpinx, etc., and in myomata. The remedy was the most efficacious in cases of hyperplastic endometritis, congestive dysmenorrhea, and the virgin uterus. The hemorrhage from myomata may be lessened by the drug. The success is somewhat less in chronic endometritis, in which the uterus is enlarged and the contractility of its muscular tissue lost. Bleeding from severe neuroses does not respond well to the drug. F. believes that the drug causes contraction of the blood vessels; through this action on the abdominal vessels less blood flows to the genitalia, causing relative anemia of the uterus, which acts as an excitant upon the muscularis and causes contraction. He generally employs a ten-per-cent. watery solution of the drug, which keeps well, and injects from one-half to a whole syringeful (*i. e.*, 0.05 to 0.1 gm. of hydrastinin). Five to six days before menstruation, and in myomata, daily injections of 0.05 gm. are made; during the bleeding, daily injections of 0.1 gm. After five hundred injections he has seen no inflammatory reaction follow the procedure.—*Am. Jour. Obstet.*

A NEW METHOD OF TREATING FRACTURED PATELLA.—At a recent meeting of the Clinical Society of London, Mr. Mayo Robson showed a patient (a young woman) on whom he had operated by a novel method to secure bony union in a case of fracture of the patella. The skin over and around the joint was cleansed and rendered aseptic and the joint then aspirated. Drawing the skin well up over the upper fragment, a long steel pin was passed through the limb from one side to the other, just above the upper border of the patella. The limb being similarly transfixed just below the patella, gentle traction of the pins brought the fragments into apposition. Antiseptic dressing was applied, and left undisturbed for three weeks; when it was removed there was no sign of irritation, and temperature had never been above normal. As the fragments seemed well united the needles were withdrawn, a plaster-of-Paris splint applied, and the patient allowed to go home. Mr. Robson observed that the only precaution necessary was to draw up the skin over the upper fragment in order to avoid undue traction upon it when the fragments were approximated. If there was much effusion in the joint it would be desirable to aspirate.—*Med. Rec.*

BISULPHIDE OF CARBON IN DYSENTERY.—Dr. Jakobleff reports in the proceedings of a Russian provincial medical society, that he has found great benefit in dysentery from the employment of bisulphide of carbon, of course, largely diluted. The quantity given per diem was from 3 to 5 grains in half a tumbler of water or milk, with a little peppermint. First of all, however, 1 or 2 grains of calomel were administered hourly until calomel stools had been induced; and during this time enemata containing 1½ grains of sulphide of carbon in 1½ ounces of water were administered twice daily. Great improvement was produced, and frequently this was as rapid as it was marked, so that there could not be any doubt that it had been brought about by the bisulphide of carbon treatment.—*Lancet.*

TREATMENT OF ERYSIPELAS.—The *Weekly Med. Review* quotes the following prescription used by Koch in the treatment of erysipelas:—

R.—Creolin	. . . . .	1 part.
Iodoform	. . . . .	4 parts.
Lanolin	. . . . .	10 " —M.

This ointment is painted on the diseased parts by means of a soft brush and covered with gutta-percha tissue.—*Med. News.*

THE CANADA LANCET.

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AGENTS.—DAWSON BROS., Montreal; J. & A. MCMILLAN, St. John, N.B.; GEO. STREET & Co., 30 Cornhill, London, Eng.; M. H. MAHLER, 23 Rue Richer, Paris.

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TREATMENT OF GOITRE.

Even in this country where goitre can not be said to be endemic the practitioner must meet with not a few cases of chronic enlargment of the thyroid gland. The fact that females suffer more frequently than males from this disease, and that the consequent disfigurement is more felt by them, renders treatment frequently necessary, and happily in the majority of cases this is successful, especially in the "acquired" form, which is the common form in America, and which rarely manifests itself until after puberty. Leaving aside the endemic variety, the chief causes of the sporadic form are, first, heredity, which is noted in the majority of cases; next, changes in the circulation connected with the sexual functions in females, such as menstration, pregnancy, child-bearing; and, lastly, all occupations which favors stasis of blood in the veins of the neck, as carrying heavy weights on the head, etc. Any of these causes may be noted as active in the cases met, and as change of residence can not be looked upon as important in their treatment, the question of cure, becomes purely a medical and surgical one. Fortunately in the great majority of cases medication by means of the iodides, combined with counter-irritation over the gland, is sufficient to cause the resolution of the growth, but in not a few instances more active measures have to be undertaken, the swelling proving intractable to the measures mentioned above.

The remedy which has proved most efficient is iodide of potash, in doses of five or ten grains two or three times a day. At the same time the swelling should be rubbed with some preparation of iodine, either the ointment or the tincture. Dr. Felix Semon recommends a combination of one part ung. iodi. to two to four parts ung. pot. iodidi

Another local application which has been markedly successful in India, is the ung. hydrarg. iodidi. rub., 15 grains to the ounce. This is to be smeared in for a few moments over the whole surface of the goitre, which is then to be exposed to the full rays of the sun as long as the patient can endure it. Within half an hour a blister forms, which should be treated in the usual way. It is said that the tumor will decrease day by day for weeks, when a second application may be necessary. Macnamara, Cunningham, F. Mouat and other observers, speak very highly of this method of treatment and its value seems to be beyond question. Other methods are the application of liq. epispasticus, B. P., as advocated by Sir Morell Mackenzie; the permanent application of cold by Leiter's tubes, to be worn twice in the twenty-four hours for a period of three hours. Various other remedies have been used with success, as strychnia, ammonium chloride, and fluoric acid. The latter given in doses of fifteen to sixty minims largely diluted, three times a day is said (Woakes) to have caused the disappearance of the tumor in seventeen cases out of twenty.

When all the above means prove useless, the parenchymatous injection of the gland with some irritant, or its excision, only remain to be attempted. The latter operation is, however, so often fatal, and if successful is so liable to be followed by myxœdema, that it is only to be undertaken when, other means having failed, the condition of the patient is such that the surgeon may hope to give a margin of life to the sufferer by undertaking it. It is said that leaving behind a small portion of the gland obviates the danger of a subsequent myxœdema. The operation of resection of the isthmus performed a few years ago by Mr. Sydney Jones, for the relief of the dyspnœa, dysphagia and cough of goitre, and which promised so well, the lateral lobes of the gland having been said to shrink after the operation, has apparently fallen into disuse, little or nothing having been heard of it for five or six years.

So that the only operation left is the interstitial injection of some irritant fluid into the gland. Numerous substances have been used and with success. Very lately Professor Moestig, of Vienna, has been using iodoform. He injects 15 to 30 minims of the following solution: iodoform 1; ether 5; olive oil 9. He has found that in each of 79 cases so treated there has been a decided decrease in the size of the neck. In substernal goitres the injection of a superficial part seems to be successful. He says that as compared with iodine as an injection the advantages of iodoform are that inflammatory complications never occur, suppuration never having been observed by him.

Ergotin, tincture of iron and Fowler's solution have also been used, but with not perhaps as much success as tincture of iodine. This is the remedy recommended by the great majority of surgeons, and lately by Terrillon, surgeon to the Salpêtrière, who has had large experience with this and other remedies used parenchymatously.

He makes the following observations as very necessary for the operator to note:—

"1. Be sure to penetrate the substance of the tumor before pushing the injection. 2. Avoid, as far as possible, transfixing the veins which ramify in the cellular tissue on the anterior aspect of the neck. The patient should be made to take a full breath, during which the swollen jugulars become prominent. 3. Have a hypodermic syringe that is clean, in order to avoid the introduction of infectious germs. Leave the syringe with its needle for a certain time in boiling water before using."

The veins may easily be made prominent also, by winding a piece of tape round the base of the neck and they will be thus avoided, a matter of much moment.

The needle should be pushed boldly but slowly into the gland to the depth of at least four-fifths of an inch, in order to avoid infiltration of the cellular tissue of the neck, which causes suppuration. He counsels, that when the needle is pushed in, the bowl be unscrewed, leaving the needle open at the base, to see whether any blood flows from it. This is an extra precaution to prevent injecting iodine into a vein. Of course if blood flows another place is chosen and dealt with in a similar manner. The syringe is screwed on and seven or eight minims of pure tinct. iodine is injected. The needle should not be immediately removed, otherwise, the fluid would follow its course and infiltrate the cellular tissue instead of being diffused in the parenchyma of the gland. Usually the patient experiences nothing more than a slight pain and a little swelling, and then the quantity is increased as may be desired. The injections should be made one at a time and a few—four or five, days apart in order to guard against iodism. Even if the pains be rather severe in the lower jaw, teeth, back of the neck, shoulder or chest they need not give alarm as they usually quickly subside. Suppuration is rare if the technique of the operation be perfect.

One injection has been known to cure a goitre, but usually they have to be repeated, frequently up to say twenty, produce a cure. The action of the agent is to produce cicatricial tissue at the place where injected, which by shrinking at the various points produces atrophy of the gland, in a similar manner to the atrophy of the liver by the increase of fibrous tissue caused by any undue irritation. The goitre undergoes a fibroid transformation.

It may seem unnecessary to caution the operator about going *too deep* with the needle, but Semon's plan of having the patient swallow with the needle in position is a good one. By noting the movement of the needle inserted into the gland one may be sure whether its point is beneath, in, or above the tumor, a matter of the utmost importance.

EXECUTION BY ELECTRICITY.

"Electrocution" is the term invented by our American cousins to express the idea of paying the death penalty through the agency of the electrical current. The daily press, as is usual with them, kept public attention riveted upon the unfortunate Kemmler for weeks before the execution took place, and the topography of the jail at Auburn, the situation of the doomed man's last seat on earth—the fatal chair—its size, shape, color and general appearance, formed the subject for many pen-pictures by reporters, anxious to secure for their respective papers a due share of prominence in the present struggle to lay before the public a description of the most revolting and blood-curdling scenes enacted in the world. It has long been considered necessary to the public welfare that executions shall be conducted privately. But if the daily press be allowed to exult in

column after column of sensational descriptions of all the harrowing details of such an event, then surely the public may as well be admitted to executions and view with their bodily eyes the scenes which are so vividly presented to the mental vision of the millions.

We believe that death by electricity might be made absolutely painless, and absolutely certain. In the present case, despite the horrible pictures presented by the reporters, of the strugglings, twitchings and convulsions of the criminal, it is as certain as anything can be in this world that his consciousness was abolished immediately, and that he suffered nothing. Much has been made of the lengthened and elaborate preparations in the chair before the current was sent to do its fatal work, and of the horrible suspense of the doomed man during that time. Doubtless such preparations are cruel, but are they any more protracted or any more cruel than the procession from the cell to the gallows and all the attendant horrors of fixing the rope, etc.? We think not. Indeed when the doomed one knows that at a certain moment he must pass into eternity it is probable that the last few hours are not rendered more terrible by any amount of preparation made for the accomplishment of the purpose of the law.

The chief objection to this method of execution would appear to be the difficulty of its general adoption in all parts of the country. It is complicated in its application, requires elaborate preparation, expensive machinery, and the presence of skilled manipulators. Without these, its action is not only uncertain but actually dangerous to executioners and spectators. So that we may not expect "electrocution" to become the popular method of execution, at least until the "harnessed lightning" is under more perfect control than at present, and that by more simple appliances than we now possess.

The English press is almost a unit in condemning the method, but is, we venture to think, somewhat unnecessarily severe in its denunciation. Thus the *London Standard* says: "The scene can be described as a disgrace to humanity. It will send a thrill of indignation throughout the civilized world. We cannot believe that Americans will allow the electrical execution act to stand." The *Times* also speaks very strongly against the method, and characterizes the spectacle as "revolting." Is it any more so than that of hanging? The lethal chamber would, we think, be preferable to any known method of execution. The time seems not to be ripe for its introduction, but there can be little doubt that if the concensus of opinion of the medical men of the world were taken, it would be shown that, had *they* to suffer the death penalty, anæsthesia would be the method adopted as a painless, and, after the first few respirations, even a pleasant way of passing out of the world.

CANADIAN MEDICAL ASSOCIATION.

The programme of the next annual meeting of the Association, which will be held in Toronto, on the 9th, 10th, and 11th September, will include the following addresses and papers:—

Address in Medicine, by Dr. Prevost, Ottawa.

Address in Surgery, by Dr. Chown, Winnipeg.

Address in Obstetrics, by Dr. J. Chalmers Cameron, Montreal.

Address in Materia Medica and Therapeutics, by Dr. W. S. Muir, Truro, N. S.

PAPERS.—"The Failure of the Removal of the Ovaries and Tubes to Relieve Symptoms," Dr. James F. W. Ross, Toronto.

"Abscess of the Brain," Dr. G. Stirling Ryerson.

"Pernicious Anæmia" (with report of two cases), Dr. A. McPhedran, Toronto.

"The Cardiac Complications of Gonorrhœal Rheumatism," Dr. R. L. MacDonnell, Montreal.

"Pharmacology of Salicylamide," Dr. W. Beattie Nesbitt, Toronto.

"Syphilitic Ulceration of the Vocal Cords," Dr. F. G. Finley, Montreal

"Cholecystotomy," Dr. F. J. Shepherd, Montreal.

"Inhalations in the Treatment of Chronic Pulmonary Diseases," Dr. Price Brown, Toronto.

(*a*) "The Local Administration of Bichloride of Mercury as an Alterative in Pelvic Exudations in Women; and

(*b*) "Why Apostoli's Method Sometimes Fails,' Dr. A. L. Smith, Montreal.

"Chronic Urethral Discharges; their Diagnosis and Treatment, with a Demonstration of the Electric Endoscope," Dr. Edmund E. King, Toronto.

(*a*) "Electricity in Gynæcology." Report of Cases;

(*b*] "Porro's Operation." Report of Case, Dr. Holford Walker, Toronto.

"A Contribution to the Operative Treatment of Injuries to the Spinal Cord in the Cervical Region," Dr. James Bell, Montreal.

"Exhibition of Cases," Dr. B. E. McKenzie, Toronto.

A dinner will be given on the evening of the 11th, by the members of the profession in Toronto, and a yachting excursion, to occupy part of the afternoon of the 10th, is in contemplation.

N.B.—Members will please note that certificates entitling them to reduced travelling rates will not be issued this year, as heretofore, by the Secretary, but will be obtained from the agent at the starting point of the journey.

JAMES BELL, M.D., *Secretary.*

COCAINISM.—The number of cases of recorded cocainism is not very great, and yet there can be no doubt that the drug is being extensively consumed by the initiated, for other than legitimate purposes. Dr. Clouston writing on this subject, sums up the evils of its use as follows:—1. It is the acutest and most absolute destroyer of inhibition, and of the moral sense generally, that we yet know. 2. The morbid craving is very intense, and control is absent. 3. The dose requires to be increased faster than that of any other such drug to get the same effect. 4. The delirium and hallucinations of all the senses of single doses, become chronic in cocainism. 5. The immediate effects are more transient than any other such drug, but this does not apply to the craving set up. 6. The treatment of cocainism consists in outside control of the patient; in stopping the drug at once; in careful watching—I should not trust a patient under treatment as regards suicide for the first week; nursing; the use of every sort of food that will keep up the strength, and of the bromide of ammonium, brandy or wine, tea and coffee, and possibly a hypnotic like paraldehyd or sulphonal for two or three nights at least. 7. A patient suffering from cocainism can usually be certified as insane so far as the presence of delusion is concerned; but he gets over these so soon, and yet is so far from the real cure, that certification and sending to an asylum is not a satisfactory process altogether. We need cocainism included in any special legislation for dipsomania.

THE TREATMENT OF RINGWORM.—Hydronaphthol is brought forward by Dr. Dockrell, of London, as a specific in ringworm (*Lancet*, 1889, ii, 1110). He says that it has been proved by experiment to be more active than bichloride of mercury as a parasiticide, and, as it is at the same time non-poisonous and non-irritant, it is an ideal remedy for ringworm. He uses the hydronaphthol plaster of ten to twenty per cent. strength, as that serves at once to limit the spread of the disease and causes penetration of the remedy. His method is to shave the head, and wash it with a five-per-cent. hydronaphthol soap and very hot water; then dry the scalp and apply the ten-per-cent. plaster in narrow strips overlapping each other at the edges and going beyond the diseased area. Outside of all he applies a ten-per-cent. melted hydronaphthol jelly so as to shut out the oxygen. At the end of four days he removes the plaster and repeats the previous processes, using a twenty-per-cent. plaster for one week. Then he repeats the processes and applies a ten-per-cent. plaster for ten days, when the disease will be found cured. During the treatment he applies a five-per-cent. hydronaphthol ointment to the unaffected parts.

ABUSE OF HOSPITAL RELIEF.—A select committee of the House of Lords, of England, is at present endeavoring to devise a remedy for the abuse of hospital privileges and relief, made plainly evident by abundant testimony. The Medical Society, of Victoria, has unanimously adopted the following resolutions: "This Society is of opinion that (*a*) great imposition on the part of well-to-do people is practised at the public hospitals, which is contrary to the principle on which these institutions were founded, and on which they should be conducted. (*b*) All hospitals receiving Government aid annually should be devoted solely to the treatment of the destitute and poor. (*c*) Paying patients should not be admitted into hospitals receiving Government aid granted for the benefit of the destitute and poor. (*d*) A wage limit should be fixed for all hospital patients (*i.e.*, all those earning more than a certain amount should be excluded). That the circumstances of each applicant for admission should be investigated by an

officer of the hospital appointed for the purpose, who should use wide discretionary power in special cases."

We have called attention to similar abuses at Canadian hospitals and can only hope that time may remedy the evils complained of, which chiefly are the granting of medical advice and medicine to those well able to pay for the same.

J. B. LIPPINCOTT COMPANY announce in press an important work on Regional Anatomy in its Relation to Medicine and Surgery by George McClellan, M.D., lecturer on Descriptive and Regional Anatomy at the Pennsylvania School of Anatomy; Professor of Anatomy at the Pennsylvania Academy of the Fine Arts; member of the Association of American Anatomists, Academy of Natural Science, Academy of Surgery, College of Physicians, etc., of Pennsylvania, with about 100 full-page fac-simile illustrations reproduced from photographs taken by the author of his own dissections, expressly designed and prepared for this work, and colored by him after nature. To be complete in two volumes of about 250 pages each, large quarto. The object of the work is to convey a practical knowledge of Regional Anatomy of the entire body. The text to embrace, besides a clear description of the part in systematic order, the most recent and reliable information regarding anatomy in its medical and surgical relations. The illustrations are intended to verify the text and to bring before the reader the parts under consideration in as realistic a manner as possible. Vol. 1 will be ready for publication about December 9th, and the second volume is expected to appear shortly thereafter. The work will be sold by subscription only. Salesmen will begin an active canvass the coming October.

PERCHLORIDE OF IRON IN LEUCORRHŒA.—The editor of the *Phar. Era* has arrived at the conclusion that of all remedies for simple leucorrhœa, the old tincture of perchloride of iron is the best, combined with hyoscyamus, opium, hop, or Indian hemp, when the mucous membrane is in a state of irritation. Tepid or cold water injections, cold hip baths, etc., are useful local applications, with rest; and avoidance of occupations involving prolonged standing or pedal exercise. Sometimes tannin, zinc, or alum, are valuable additions to the injections. When the discharge emanates from the glands of the os uteri, local applications of belladonna and bi-carbonate of potash, are serviceable, two ounces of the tincture and a teaspoonful of the alkali to about a pint of water.

WOMAN'S MEDICAL COLLEGE, TORONTO.—The following changes have been made in the Faculty of the Woman's Medical College, Toronto:—Dr. A. A. Macdonald, is appointed Clinical Lecturer in Medicine; Dr. W. B. Thistle, Clinical Lecturer in Diseases of Children; Dr. George Acheson, Lecturer in Pathology and Histology, normal and pathological (*vice* Dr. Carveth resigned); Dr. S. P. Boyle, Toronto, and Miss E. J. Irvine, are appointed Assistant Demonstrators in Anatomy; Dr. S. P. Boyle, is also Assistant Demonstrator in Histology; Miss E. J. Irvine, Pathology. Dr. Duncan is Acting Dean.

SULPHONAL IN CHOREA.—In a recent number of the *Medical News*, John A. Jeffries, M.D, gives in full the clinical histories of ten cases of chorea which were treated with sulphonal, either alone or in conjunction with arsenic. Of the ten cases, only five were of recent origin, and these all recovered within three weeks. In two of them, arsenic had failed, in two it was never used; in the fifth either arsenic or sulphonal alone failed, but when used together they quickly brought about an improvement. As to the five cases which were of long standing, four were at the age of puberty; three got well, at least for a month; in three arsenic had failed; in two it was not used. Two did not recover with any treatment. It is the opinion of Dr. Jeffries that sulphonal is to be regarded as a valuable adjuvant to arsenic. On sulphonal alone many cases are apt to grow pale and show the need of a tonic; this want arsenic supplies, and at the same time affects directly many cases of chorea. The doses in which sulphonal was employed, were 5 or 6 grs. for a patient of 15 years, and 3 grains for one of 4 years.

CURE OF CANCER BY ERYSIPLAS.—Says Dr. Laplace (*Med. News*), I will say that the cure of cancer should not be considered hopeless. At the recent Congress of Surgeons in Berlin there were reported six undoubted cures of epithelioma and sarcoma by following the treatment. About

twenty years ago a French surgeon, still living, had a case of cancer of the breast which was too far advanced for operation. As the surgeon was not very cleanly, not being acquainted with our methods of antisepsis, the patient developed erysipelas, and after nearly dying, recovered. About a month later she had a second attack of erysipelas, after which the growth took on a benign appearance and progressed to recovery. Since then two surgeons have been inoculating cancerous patients with the germs of erysipelas, and now report the cure of six cases.

INHALATION OF IODIDE OF MERCURY IN TUBERCULOSIS OF THE LUNGS.—After prolonged observation (*Therap Gaz.*) Drs. Miguel and Rueff have reported favorably on this method of treating phthisis. One part of biniodide of mercury and one part of iodide of potassium are dissolved in 1000 parts of distilled water, and this solution is employed in the form of a spray; at first only once daily, and later, when the patients have been accustomed to it, twice daily. In cases where the irritation was excessive the solution was diluted to one-half its strength, without deteriorating from the germicidal powers. One of the chief conditions of success is to prolong the treatment, and this can be done for a year or more without evil effect to the patient.

CHRYSOPHANIC ACID IN ACNE.—Dr. Metcalf highly recommends this agent in acne. He says he has not failed to cure perfectly any case in which the treatment has been adopted. The face is to be washed with soap and well dried, at night. Before retiring, the parts in which the acne is, are to be well rubbed with an ointment of 3 grains of the acid to the ounce of vaseline, and this is repeated nightly until a sharp inflammation of the skin ensues. The inunction is then omitted till the dermatitis is gone, when it is repeated. In most cases a 3-grain ointment is of sufficient strength, but occasionally the strength is to be increased up to 5 grains to the ounce, or even more. The patients are to be cautioned about the staining of their fingers and clothes and to guard their eyes.

NITRATE OF POTASSIUM FOR CHILLS.—Dr. Hunter, of New Orleans, reports in *Texas Med. Jour.* a number of cases of chills in which marked benefit was obtained by the use of nitre in doses of about thirty grains. The remedy was not infallible, but in most cases some relief was afforded, and in many a permanent cure was obtained. To abort a malarial chill, he says, has heretofore been difficult of accomplishment, but to abort and at the same time effect a radical cure with a few grains of so simple a salt is without precedent in medical experience. One of his cases was a chill following the opening of an abcess, the others were all malarial in their origin.

SPARE YOUR DOCTOR.—The *Albany Press* says: "Never telephone or send for a doctor to come immediately, when you can just as well say: 'Any time this morning will do, or come as soon as it is convenient.' You may be causing others much more dangerously ill than yourself to wait unnecessarily. Furthermore, remember that every man needs one day in seven in which to rest. Spare your doctor his Sundays, if possible. No one should work three hundred and sixty-five days in the year, and consume part of the nights as well, and face the inclemency of all weathers, climate, and seasons, without having proper chance for rest and recuperation. Eminently sound doctrine. But even under these adverse circumstances the doctor would not complain if the patient did not so often forget the character of the services when the bill is sent. We should say spare your doctor, and also pay your doctor."

THE British Government have appointed a Commission to investigate the question of tubercular infection from food. They are required to report on "what is the effect, if any, of food derived from tuberculous animals on human health; and, if prejudicial, what are the circumstances and conditions with regard to the tuberculosis in the animal which produce that effect upon man."

THOMPSON'S REMEDY for tape worm (*Pacific Med. Jour.*) recommended by Lœbsch is: Chloroform ʒj., simple syrup ℥j. Agitate together and give in three doses, one at seven, another at nine, and the third at eleven a.m. Follow this one hour later with an ounce of castor oil.

SAYS the *Hosp. Gazette*: The civilised woman has a good deal to put up with, especially as concerns the perpetuation of her species. Owing to a lack

of muscular exercise her frame becomes slighter and her pelvis narrower, but *pari passu* the educational requirements of the present day lead to an undue development of the cerebrum, with a corresponding increase in the size of the head. Our cleverest mathematicians have not yet solved the problem of allowing a large head to go through a small pelvis, and although the disproportion has not yet attained such dimensions as to render further procreation an impossibility, the tendency has had for effect to render labour a pain instead of being a pleasure—as we are assured it is with Hottentot women and the lower animals. Doubtless some folk will seek to saddle the School Board with a share of the responsibility, but this share of the blame must be potential rather than real, seeing that its influence has, as yet, hardly had time to make itself felt on mankind to this extent.

TUBERCULAR PERITONITIS.—Dr. Wm. Osler has arrived at the following conclusions regarding this disease :—

1. Tubercular peritonitis is often a latent affection, localized in the peritoneum, and may even run its course without inducing special symptoms.

2. As in other local tubercular processes, there is in this a natural tendency to healing, which takes place more frequently than has hitherto been supposed.

3. Statistical evidence shows laparotomy to be in many cases a palliative, and in a certain number, a curative measure.

PHENACETIN IN TYPHOID FEVER.—Dr. Sommer has used phenacetin (*Lancet*) with great success in the treatment of typhoid fever, thus confirming the favorable views of its action which have been expressed by Masius and others. The dose employed for adults was four grains, which was repeated from two to four times during the twenty-four hours. Children were given only half this dose. No less than sixty cases were treated in this way, with but one fatal case, about which it is noted that the patient was not subjected to phenacetin treatment until three weeks from the commencement of the attack. In no case were there any serious complications.

MEDICAL EDUCATION IN HOMŒOPATHIC COLLEGES.—The Collegiate Committee of the American Institute of Homœopathy, recently held at Waukesha, Wis., recommended that a four years' course of study be compulsory for all students entering college after the session of 1891-92. The Institute voted that this should be the course in each of the thirteen colleges of the Homœopathic school.

JOHN MUIR, M.D., Member College Physicians and Surgeons, Ontario, Canada, Ex-Vice-President Ontario Medical Council, says : "I take pleasure in saying that I have found Papine (Battle) prompt, efficacious, and —better still—unobjectionable as to after effects. A patient, more than usually intolerant of other preparations of opium, has borne it well, and derived manifest benefit from its use."

FOR LEUCORRHŒA AND BLENNORRHŒA IN WOMEN. (Lutaud.)—*Jour. de Med. de Paris.*

℞.—Creolin, ... gtt. xxx.
Ext. fluid hydr. canad., fl ʒ ijss.

Sig.—Two teaspoonfuls in a pint of warm water to be used at one injection.

As a urethral injection the following formula is used :

℞.—Extr. fluid hydrast. canad., gtt. xxx.
Creolin, - - - - - - - gtt. x.
Aquæ, - - - - - - - fl. ʒ viii.

Sig.—Use pure as a urethral injectiom.

BALSAMS are usually supposed to cause irritation of the urinary organs, when given in large quantities. Stockman *(Brit. Med. Jour.)* has made some investigations concerning balsam of Peru, storax, benzoin, and tolu. As a result, he considers it proved that all these can be given in as large doses as are ever desirable, without any risk of producing albuminuria or nephritis. They never cause enough irritation to injure the healthy kidney, although they may irritate one already diseased. In some cases, a resinous body from the balsams has been mistaken for albumen.

FOR EAR-ACHE.—The *Med. Brief* says : take five parts of camphorated chloral, thirty parts of glycerine, and ten parts of oil of sweet almonds. A piece of cotton is saturated and introduced well into the ear, and it is also rubbed behind the ear. The pain is relieved as if by magic, and if there is inflammation it often subsides quickly.

DECORATIONS AND PROMOTIONS—We are pleased to note that General Sir Fred. Middleton has recommended the following decorations and promotions, for distinguished services:

To receive the G.M.C.—Dr. Sullivan and Dr. Roddick.

To be Brigade Surgeons—Dr. Sullivan and Dr. Roddick.

To be Surgeons-Major with rank of Lieut.-Col.—Drs. Orton, Graveley, Bell, Strange, Pennefather, Ryerson, Codd.

To be Surgeons—Dr. Whiteford, Dr. Grant, G. G.F.G.

ASTHMA.—Barthlow's prescription for asthma, says *The Brief*, is:—

℞	Potass. Iodidi.	ʒ iij.
	Ext. Belladonnæ fl.	ʒ j.
	Ext. Lobeliæ fl.	ʒ ij.
	Ext. Grindelii.	ʒ ss.
	Glycerini.	℥ iss.
	Aquæ Dest.	ʒ iss.

M. Sig.: A teaspoonful every two, three or four hours, as necessary.

R. J. MITCHELL, M.D., Thomasville, Ga., says: I have given S. H. Kennedy's Extract of Pinus Canadensis an extended trial. I am satisfied that it is a greater medicine than it is represented to be. In gonorrhœa, leucorrhœa and gleet, it acts like magic.

℞.—S. H. Kennedy's Extract Pinus Canadensis (White) . . . . . 2 ounces.
Glycerine, ... ½ ounce.
Aquæ, ... 6 ounces.—M.

Sig.—Inject three times a day after urinating.

I also used the Dark in chronic dysentery with pretty good results. The case of leucorrhœa was of eight months' standing. I hope and predict that in the near future every physician will carry a bottle of S. H. Kennedy's Extract of Pinus Canadensis in his saddle-bags.

ROYAL COLLEGE OF PHYSICIANS AND SURGEONS, KINGSTON.—The following appointments have been made in the above College: Dr. Oliver, Professor of Clinical Medicine; Dr. Hooper, Instructor in Clinical Medicine and Clinical Surgery; Dr. D.E. Mundell, Professor of Histology and Applied Anatomy; Dr. Herald, Professor of Materia Medica and Therapeutics.

PERSONAL.—Drs. J. R. Logan, of Grand Forks, F. N. Burrows, of St. Thomas, and McLachlan, of New Rockford, have been appointed members of the Board of Medical Examiners for the State of North Dakota. These gentlemen are Canadians, and graduates of Canadian Universities. The new medical law in Dakota closely resembles that in Ontario.

The Alvarenga Prize, of the College of Physicians of Philadelphia, consisting of one year's income of the bequest of the late Senor Alvarenga, of Lisbon, has been awarded to Dr. R. W. Philip, of the Victoria Dispensary for Consumption and Diseases of the Chest, Edinburgh, for his Essay on Pulmonary Tuberculosis, which will be published by the College.

THE AMERICAN PUBLIC HEALTH ASSOCIATION is to hold its next meeting at Charleston, S. C., on Dec. 16, 17, 18 and 19.

Mr. BRYANT has been elected President of the Royal College of Surgeons, as successor to Mr. Jonathan Hutchinson.

DR. MACKID, of Seaforth, has removed to Calgarry.

Books and Pamphlets.

ESSENTIALS OF ANATOMY AND MANUAL OF PRACTICAL DISSECTION, together with the Anatomy of the Viscera, prepared specially for the students of Medicine, by Chas. B. Nancredi, M.D., Professor of Surgery and Clinical Surgery in the University of Michigan, Ann Arbor, etc. Third edition, revised and enlarged, based upon the last edition of Gray's Anatomy; 30 full page colored plates and 180 wood cuts. Philadelphia: W. B. Saunders. Toronto: Carveth & Co.

This is one of Saunders' popular series of Compends for Students. It cannot hope to replace the large manuals on the subject, but will be very useful as a refresher to the memory of the facts learned therein. The colored plates are good, and we think now almost indispensable in any book designed for the study of anatomy. It is by far the best Compend of Anatomy we have seen, and we can commend it not only to students but to practitioners, as a concise and comprehensive resumé of the important facts contained in the latest works on anatomy.

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ADDRESS IN MEDICINE.*

BY L. C. PREVOST, M.D., OTTAWA.

I hardly know truly, how to thank our worthy President and the members of the Council, for the distinguished honor they conferred upon me in intrusting to my hands the task of presenting the address in medicine before the highest medical society of the Dominion. In selecting me, in spite or rather, perhaps, on account of the nationality to which I belong, when so many others were certainly better qualified to fulfil this duty, they yielded more to courtesy than to the appreciation of my own merits.

This is the way that we, physicians, understand true and genuine equal-rightism, and surely we are right to be proud of it. Politics may divide, but science unites nationalities. As I eagerly wish not to be in debt of delicate manners with those who bestowed such an honor upon me; being aware, besides, of the deep feelings of loyalty so universally contained in the hearts of all true Englishmen, I am satisfied that I shall be agreeable to you all in availing myself of this occasion to highly confess the sentiments of respect with which I am animated towards our most gracious Queen, whose humble and most devoted subject I am proud to be.

Gentlemen, when we look back to the few years which have just expired, we are amazed at the immensity and importance of the advancement realized in medical sciences. I would have liked to lay before you, in this paper, all the acquirements recently obtained in medicine, but I would have had to deal with a gigantic task, rather impossible to overcome, when such a work had to be contained in the narrow limits of a small number of pages. Never, in fact, has such an amount of work been done, as now-a-days. There are few sciences in which so much has been accomplished as in medicine; observers have never been so numerous and never have they offered with such liberality to the medical world the precious results of their investigations.

I regret, for example, that the limits of this address do not allow my presenting with details, the admirable discoveries realized by neurologists. What marvels revealed by the thorough study of hysteria, mental diseases and heredity in these affections! What precious revelations attained with regard to the pathology of the brain and the spinal cord!

Every corner of neurology has been perused; usual symptoms have been studied over, and more closely examined, their value in semeiology has been more precisely indicated; new ones have been discovered, new morbid entities created.

The influence of these researches will daily more and more be felt in therapeutics. What cannot be hoped, indeed, when the study of nervous diseases has arrived at such a degree of precision that the surgeon can, to-day, almost harmlessly open the skull with the trephine, remove neoplasms from the cerebral substance, guided in his researches by the nature itself of the troubles he wants to combat! But amongst the discoveries which recently have most contributed to the advancement of medical science, there is one newly born, the effect of which has been to cause the healing art to enter a new era and which has transformed in medicine even up to the sense of the word, malady; I want to speak of bacteriology.

The medical science of to-day, gentlemen, has not been renovated, as is generally said, but its object has changed. During several years the study of symptoms, pathological physiology, the researches of anatomical lesions have been the object of scientists' attention; but to-day, pathogeny is the subject towards which they particularly direct their investigations. The study of the origin of new diseases is what characterizes our medical epoch.

Among the processes through which morbid causes succeed in producing diseases in our organism, there is one, the notion of which can be retraced far in the past, but which appeared in its true light only within the last twenty-five years:

*Read before the Canadian Med. Association, Aug., 1890.

I mean infection. At present the living nature of the contagious matter is beyond any doubt.

Ever since man has had the notion of contagion, all sorts of conjectures have been formed concerning its nature. But of all hypotheses, no one could be verified until the day it was demonstrated that, in the body of an individual afflicted with a contagious disease, there exists inferior organisms capable of fixing themselves and multiplying in the tissues of another individual and liable to determine in the latter a disease similar to the first.

In general, great discoveries are not the deeds of a single man ; they appear as the realization of of an ideal aspiration which, during a more or less extensive preliminary period, is marked by isolated endeavors, the importance and signification of which we generally fail to recognize.

It is true that, in the seventeenth century, Robert Boyle, and later on, Tyndall, Haneau and Villemin have had as a glimpse of what was going to be later the resounding discovery of bacteriology ; but it is not less true that to Pasteur is due the origin of the new doctrine and it is a duty for whomever speaks of bacteriology, to mention at first the name of the illustrious scientist whom France, nay, the whole humanity, is so rightly proud to possess.

It is to Pasteur that we owe this wonderful discovery of the rôle played, on our planet, by a whole world of infinitely small beings which, everywhere, invisible and present, contsitute, by the manifestation of their incessant activity, one of the greatest forces which govern matter and determine its transformations.

In applying all the faculties of his deeply investigating mind to the study of these infinitely small beings, much more powerful than the antediluvian monsters, and often much more dangerous, M. Pasteur has succeeded in watching them at work, in catching the play of their functions and in establishing their relations with the phenomena of fermentation of which they are necessary agents.

All fermentable substance can be preserved indefinitely in a vessel, if we take care to keep it constantly impervious to the air, which is the vehicle of microbes. It will remain in that unchanged state for months, years and even centuries. But let us allow the atmosphere, full of its microbes, to come into contact with these substances, the molecules of which had so long remained intimately connected with each other, and a few hours will not elapse ere we see them being agitated ; heat is developed, gas produced by new combinations is set free and a change of state takes place.

The great discovery of the rôle played in fermentations by these minute beings of the invisible world, naturally led M. Pasteur to wonder whether it could not furnish some explanation to certain pathological phenomena characterized also by a great development of heat and during which takes formation a humor different by its characters and properties from physiological humors. He accordingly went to work and very soon light was thrown on the domain of pathology upon phenomena quite as mysterious, as obscure and until then as impenetrable as had been fermentations.

He then clearly demonstrated that the contagion of a certain number of diseases at least, is but the function of the infinitely small beings of the invisible world, each special malady depending on a special kind of microbe which is particular to it and of which it expresses the active manifestations.

The agent of transmission of each of these maladies, is the microbe itself, which, after infinitely multiplying in the organism it has infected, is being carried to a sound organism and again multiplies in the latter, giving rise to the same trouble, the same disorders and the same fatal accidents.

Here is then, at last, the virus : That mysterious agent of ancient pathology and the unauspicious action of which they formerly tried to explain by catalysis ; here it is ! It has assumed a material body that we can see when we proportionate through an instrument the power of sight to its infinite smallness. We can cultivate it, outside of the organism, in liquids appropriate to the exigencies of its nutrition ; we can even master it, tame it, as it were, in attenuating its energy until it has been transformed in its own vaccine, that is to say, until it has kept up but the power of conferring by inoculation the singular privilege of immunity owing to which the strong virus shall hereafter be altogether or for a long time, without any powerfulness on the organism.

Carbuncle or anthrax was the medium which connected the study of fermentation and that of diseases. After having demonstrated the existence of

the "bacillus anthracis," Pasteur also discovered the microbe of septicæmia and that of cholera of fowls. The micro-organism of the latter disease was cultivated in a special *bouillon* made with hen's muscles and Pasteur demonstrated that when these media of culture were old, instead of producing, by inoculation, the death of the animal, they would give him a transient affection only, but these fowls so inoculated were by the fact preserved from the disease and would resist inoculation made with a very virulent liquid. It was, we may say, the greatest discovery of this century: that of attenuation of virus, and it was in the midst of the applause of the whole world congregated in London at the International Congress of 1881, that Pasteur pronounced the following words: "I have lent to the expression of vaccination an extension which science, I hope, will sanction as an homage paid to the immense services rendered to humanity by one of the greatest savans of England, Jenner."

All these unexpected results produced a general emotion amongst scientists. It was like a revelation; they felt that we were on the eve of discoveries which would very soon teach us the nature of all virulent diseases as well as the vaccine to oppose to each of them. Several biologists, carried on the wings of those dreams of glory for them and of triumph for science, went to work in search of new organisms, studying in the same time new cultures. Laborious seekers directed their investigations towards diseases the causes of which had been so far unknown and succeeded in surprising amongst microscopical organisms more than one malefactor of which science had not, till then, even suspected the existence.

The vast importance attached to the knowledge of micro-organisms in science could not but attract the attention upon the origin of microbes in general. Whence came these microbes? This question, a problem as old as the world, aroused anew and divided scientific men.

Can a being be born without parents? Does spontaneous generation exist?

These minute organisms which are found under the microscope in a drop of infected blood, where were they before they showed themselves there? Have they spontaneously originated in Robin's blastema, or do they come from Bechamps' eternal microzimas? Or again, according to Helmholtz' theory of cosmical organic germs, have they fallen from some planets, being carried away by one of the innumerable meteors which detach from them to travel across the space?

Eternal hypothesis of the origin of life! Mysterious problems, with their solutions apparently always at hand, and still for ever receding! Suffice it to say, that Pasteur, by his memorable experiments, has succeeded in thoroughly annulling the objections of the partisans of spontaneous generation. He successfully demonstrated that the germs of our diseases are profusely diffused in the air; *quærens quem devoret*, and waiting for favorable circumstances to develop themselves.

Our eyes cannot perceive these small organisms which swarm by millions in the atmosphere. We take our leisure by walking out in the country, fancying we breathe but pure air and sweet scent of flowers. Alas, what a delusion! According to Miquel, in the open fields, where the atmosphere seems so limpid, there are, mixed with pollen and the remains of plants, 30 to 40 micro-organisms by cubic meter of air. In our cities, in our houses, how much greater still is their number. They lie everywhere; our clothes, our furniture, our books, the walls, the hangings of our houses are covered with them. The water we use for our ablutions, the water which purifies, as we fancy, the things it washes, the water we drink, how many microbes does it not contain and nourish! Miguel has demonstrated that a single glass of Seine water contained 300,000 microbes.

Evidently, all these micro-organisms are not malefactors; many of them are, on the contrary, for us very useful auxiliaries. Others are quite harmless or indifferent. But mixed with these inoffensive germs there exists around us an immense quantity of them which are formidable. Such are the germs of infectious and contagious diseases, especially during epidemics.

If then we are surrounded by injurious microbes, if, moreover, as it has been demonstrated by several biologists, we conceal some of them within our body in the normal condition, as for instance, the pneumococcus of pneumonia, and the streptococcus of erysipelas, how is it that we so often and so generally escape their harm? Who, or what then protects us from maladies it is their mission to determine in living tissues? Ah! it is that the microbe, however powerful it may be,

the microbe is not the only element to be taken into consideration in pathology. The microbe does not alone constitute the disease, it requires a suitable soil and favorable circumstances for its development. It is the germ, the seed, but this germ will forever remain sterile should it fall on a soil unsuitable to its culture, and this is what explains the absolute or relative immunity we possess in the midst of the morbific causes which surround us. The teachings of bacteriology itself have placed us in a position to explain this immunity already revealed by clinical experience. This immunity consists in the integrity of our organism, the tissues of which possess in themselves their means of defence against the parasites which threaten to invade them. An impermeable barrier, for example, is set up to the entrance of bacteria by the epiderma and intact epithelia. But, even when the microbes have succeeded, owing to a rent in the cutaneous or mucous surfaces, in penetrating the subjacent tissues, a real defence is being organized by the reaction of our organism. Very soon a rush of fluids takes place to the spot in danger. White blood-corpuscles and wandering cells emigrate by diapedesis through the walls of the blood vessels; they surround the infectious agents. They, at first, encircle, imprison these invaders, but soon take them up within their cell-envelope there to be devoured and digested.

This is the phenomenon to which Metschnkoff has given the name of phagocytosis.

Leucocytes are especially endowed with this property of seizing and digesting the microbes, but they are not alone to enjoy this privilege. The connective tissue-cells, the cells of the spleen, bone, marrow, the vascular and lymphatic endothelia possess also in a greater or less degree the power of taking solid particles into their interior, virtually, as we say, of eating them. In short, there exists after the entrance into the blood of microbes, a period of collectedness, so to speak, during which they sustain an intra-cellular struggle. Human cells may remain victorious, but if the microbe is the most energetic, it will grow, develop, and infection continues.

The life of animal cells, the activity of their nutrition is a guarantee of the organism against the microbes. Wherever life is diminished or suspended in some part of the economy, the infectious agents that are there multiply and triumph over our cells.

Nervous perturbations, the impression of cold, physical and moral commotion, sorrows, night-labors in lessening the action of vaso-motors and rendering therefore diapedesis and consequently phagocytosis more difficult, become the occasional causes of the development or aggravation of infectious diseases. The above has been demonstrated by Charrin and Gley, whose experiments were recently cited by Bouchard at the Berlin International Congress.

(*To be continued.*)

BANFF AS A HEALTH RESORT.

BY J. MURRAY M'FARLANE, M.D., C.M., LETHBRIDGE.

As accessories to medicinal agencies, we are all well aware of the great therapeutic advantages to be derived in chronic affections of various kinds, from the application of such hygienic measures as may be obtained by a sojourn at some "Spa," or watering place, where, united to the efficacy, more or less pronounced, of the saline and gaseous ingredients of the waters, in promoting metabolism, we combine the undoubted benefit of environment, such as scenery, change of air or latitude, and the freedom from the cares and worries of business, or professional pursuits.

Having recently visited Banff, I was simply charmed by the combination of advantages which it possesses for the invalid, in its mountain climate and sulphur hot-springs. Therefore, I thought a paper to the LANCET might prove of utility in furnishing some of our medical men with information which may come in handy at any time, although the fact that the Canadian Medical Association held a most successful meeting last year at Banff, must, of a necessity, have rendered a great many practitioners thoroughly conversant with the health resort of the future. Banff is nestled among the crags of Canada's National Park, in the Territory of Alberta, on the eastern slope of the Rockies, surrounded on every side by the towering peaks of this famous mountain range, some of which, even at this time of year, are covered at their summits by a mantle of stainless snow; which lends a delicious coolness to the atmosphere, proving a most agreeable change to those arriving

from the sweltering and enervating warmth of the plains or Eastern Provinces. "The Springs" are situated at an altitude of 4000 feet above the sea, so that Banff combines the climatic advantages of the mountains, the therapeutical virtues of the ingredients of the water, with the social benefits of the palatial hotels, with which the place is amply supplied; although to the Canadian Pacific Railway must be awarded the palm, their magnificent structure being, *par excellence*, the finest in the mountains. It resembles a picturesque Swiss *chalet*, of very substantial appearance, and a closer inspection reveals its many excellent qualities, the rooms being large and airy, each lighted by the incandescent light; the sewerage system as perfect as money and expert skill could make it, in fact it fulfils to the letter the plan of its design, that is to say, a perfect home for the tourist or invalid. The table cannot be surpassed. Every delicacy of the season, being served in a manner equally pleasing to the vitiated palate of the gourmand, and the fastidious stomach of the valetudinarian. Nothing makes a prettier sight than is presented by a view of Banff just about dusk in the evening. The myriad electric lights of the C. P. R. Hotel, twinkling through the slender greenish-brown pine trees; the dim masses of the surrounding mountains beginning to vanish, gradually fading in color at their summits, which are tinged an orange red by the rays of the setting sun; finally, the last beam of light dying away, silence reigns supreme, broken only by the chirrup of the cricket or the purling of the river, as it makes its way down to its destination in the plains to the east.

Discussing the subject of the mountain climate, we find that as we rise above the level of the surrounding plains of Alberta, two facts are impressed upon us: 1st. The air becomes more and more rarified, and secondly, the heat diminishes. The higher we rise, the greater these meteorological peculiarities become marked, proving important factors in certain classes of disease, as we shall see.

The climate of mountains exerts a proverbially healthy action, owing to the purity of the air, and perhaps to the sparseness of population. As Quain remarks, they have been highly praised by many Continental authorities, in the treatment of phthisis, the freedom of the air from irritating germs, its coolness and rarity being of great benefit to sufferers from incipient lung trouble.

The atmosphere being, as we said, of a lower density than at the sea level, is also less humid, or damp, although owing to local winds, mist and cloud occasionally form. The temperature too is lower, especially at night, thus ensuring better sleep to the invalid, who awakes refreshed from a balmy slumber, to which he perhaps had long been a stranger. The general effect of this dry and rarified atmosphere, is to produce an increase of the cardiac action, with concomitant freedom of circulation; one curious effect of this is a buzzing in the ears, which affects some visitors for a day or so, but then passes away. The respirations become deeper, the lungs more vascular, and the air cells expand to a greater degree, thus increasing the vital capacity of the chest. Some are known to have had their chest measurement increased two inches, after a residence of one year in the Rockies, which fact speaks for itself. Bodily movement is more easily performed, thus ensuring a desire for exercise, while owing to the lowered temperature, more food is necessary, the appetite improves, and a gain in weight results as a sequence, the effect being tonic and stimulating in the extreme.

And what classs of diseases may be benefited by a climate such as Banff affords? According to practical experience, they are as follows:

1st. In the early stage of phthisis, before much structural damage has been done.

2nd. In hereditary tendency to chronic pulmonary mischief, especially in young people, with badly developed chests, and a history of struma, the coolness of the air being of great benefit to consumptives, who suffer severely from the heat.

3rd. As a restorative, in the neurasthenia or nervous prostration, in overworked professional or business men, who frequently find here the relief, long sought for, by the aids of bromide, strychnine and the hundred and one alleged cures, for this, too prevalent affection.

4th. In cases of hay fever, which is unknown here. (The "Hay Fever Association" should make a note of this fact.)

5th. In Dyspepsia, and convalesence from acute illness, in persons not much over middle life.

A mountain climate is, however, contra indicated in chronic Bright's, heart disease, and emphysema,

the rarity of the air being particularly dangerous in these affections, especially if well marked.

It is a well established fact, that in persons suffering from chronic disease, environment has a great deal to do with the curative action of purely medicinal remedies. Therefore at Banff Springs the sublime scenery of the surrounding country, with its wealth of rugged beauty, its pine covered ridges, the majestic peaks towering in every direction, its mountain lakes, and romantic rivulets, which tear down icy cold from the melted snows of the summits, to join the rapid greenish-blue waters of the Bow River, which trails its serpentine length through our National Park. All these most potently assist the recovery of the invalid, who is taking a course of the sulphur waters. Every possible inducement exists for the enjoyment of physical exercise. For those fond of walking, there are pleasant paths, which wander in all directions, sometimes through balsamic scented pineries, others along the bank of the river, which wanders through the valley at the foot of the Titanic Range, which towers in rugged masses in every direction, as far as the eye can reach, disclosing new beauties of nature to the delighted pedestrian at every step.

For the sportsman, the speckled beauties, dear to all disciples of Izaak Walton, abound in nearly every roadside brook. While at a greater distance may be had the famous mountain sheep, which are becoming rarer every year, and like the buffalo seem doomed to extinction. Riding and driving may be had by those who desire it, good livery stables being quite near the hotel. So we see that Banff holds out inducements, of a very superior quality, to the ennuied health seeker.

Having told of the climate and scenery we will now discuss the "Hot Springs," which are becoming ustly famous throughout America and even Europe as well. The waters bubble up from the bowels of the earth, laden with medicinal virtue, heated to a temperature of 100° to 108° in nature's cauldron; and belonging to the class of alkaline sulphur waters.

The following are said to be the ingredients, according to the Government analysis of 1887, but I cannot vouch for its correctness, the analysis not having been made on the spot, and during transportation to Ottawa some of the gases must have escaped or changed their chemical composition; nevertheless the curative effect of the water is beyond cavil in certain diseases, which I will hereafter enumerate. In 100,000 parts of water there are the following saline and gaseous constituents:

Sulphuric anhydride	51.26
Calcium salts	24.48
Carbon dioxide	16.47
Magnesium oxide	4.14
Sodium oxide (calculated)	27.53
Silica	traces
Organic matter	traces
Total solids,	parts 123.88

And who may use these springs with benefit? It seems that their predestined function is for chronic invalids, and it may be encouragingly added for all, except the unfortunate victims suffering from such incurable maladies as advanced Bright's and malignant affections, which of course are not amenable to successful treatment.

The large quantity of water taken at the hot springs acts most beneficially, especially in the long category of affections belonging to what is now termed the uric acid diatheses. Upon this subject Fothergill speaks in the following terms:

"The good effects of watering places are largely due to the increase in the bulk of the fluid taken there, irrespective of any special property of the water. Especially is this the case of ladies who, as a rule, habitually take too small quantities of fluid."

Further, there is an impression abroad that it is dangerous to dilute the gastric juice too freely, and this has a tendency to cause many who should know better to use less fluid than is necessary for the proper maintenance of the bodily functions. This idea it is needless to say has been exploded by recent researches by noted physiologists. Then there can be no doubt as to the efficacy of fluids in the treatment of uriasis, or defective metabolism of the heterogenous portions of the ingesta, by the liver, where instead of the highly soluable urea being formed, the insoluble uric acid is the product manufactured. This being the case, large quantities of water should be taken so as to render as far as possible the circulation of uric acid in the blood, where it becomes a powerful irritant, as inert as possible thereby avoiding the long train of ills which gradually lead up to that medical bugbear

arterio capillary fibrosis with the various pathological changes so ably written of by Fothergill and others.

Gouty people drink as a rule too little water and more is essential to their well being, and if the water be alkaline, as at Banff, so much the better, for taken before meals it stimulates the secretion of the acid gastric juice as Ringer has demonstrated, thus materially aiding digestion, relieving the drowsiness, despondency and mental apathy, common to disorders of the alimentary canal. Banff combining as it does the climatic benefits of the mountains with the therapeutical activity of the hot springs, in a most agreeable form, seems to be the best health resort in America in the treatment of the diseases of which we have spoken.

The waters are to be taken in combined drinking and bathing courses, and we find their best effects in the following disorders: Hepatic congestion, hæmorrhoids, laryngeal, pharyngeal, and bronchial catarrh, in early lung mischief, in rheumatism and gout, cutaneous disorders and constitutional syphilis, the latter especially being benefited as many of the cow boys and other residents of this western country can testify. Mercury of course is given as usual. Space will not permit of my telling how the baths are taken, but all is done under competent medical advice. Dr. Brett, the resident physician at the "Sanitarium," having charge of this department, any further information will be given by him to those writing for it. I cannot, even at the risk of being considered prosy, omit telling of the many persons met with, who, after patronizing in vain the "Spas" of Europe, at length found relief in Canada for their chronic pains and aches. Persons were seen who had come to Banff confirmed cripples with rheumatic disorders, and, after a due trial of the thermal baths were able to throw away there now useless crutches, and depart to their homes enjoying a peace of body and mind to which they had been strangers for years. In concluding I can only state that if any of my medical confrères send patients to the mountains they may rest assured that every attention possible will be paid to them by the C.P.R. people, whose courtesy is proverbial, and that they will be benefited physically, I am most positive; if the universal satisfaction which I saw evinced on every side be any criterion.

Reports of Societies.

CANADIAN MEDICAL ASSOCIATION.

The 23rd annual meeting of the Canadian Medical Association was held in the Theatre of the Normal School, Toronto, Sept. 9th, 10th, and 11th. The programme was a full one, but the attendance, especially at the opening, was small. The President, Dr. James Ross, of Toronto, delivered a very interesting address, in which he fully explained the aims of the Association and its purpose. In the afternoon Dr. Prevost, of Ottawa, gave the address in medicine—an excellent one which appears in this issue of THE CANADA LANCET. The programme, which we gave in our last Number was pretty faithfully carried out.

The officers for next year are as follows:—

President—Dr. T. G. Roddick, Montreal.

General Secretary—Dr. Birkett, Montreal.

Treasurer—Dr. W. H. B. Aikins, Toronto.

Vice-Presidents—Ontario, Dr. A. H. Wright, Toronto; Quebec, Dr. S. P. Lachapelle, Montreal; New Brunswick, Dr. S. H. Coburn, Fredericton; Nova Scotia, Dr. John Stewart, Picton; Manitoba, Dr. D. Young, Selkirk; British Columbia, Dr. E. A. Prager, Nanaimo; Prince Edward Island, Dr. Taylor, Charlottetown; North-West Territories, Dr. E. A. Kennedy, of McLeod.

Local Secretaries—Ontario, Dr. Prevost, Ottawa; Quebec, Dr. P. Robertson, St. Andrew's; New Brunswick, Dr. Bruce, St. John; Nova Scotia, Dr. A. Morrow, Halifax; Manitoba, Dr. Milroy, Portage la Priarie; British Columbia, Dr. Fagan, New Westminster; Prince Edward Island, Dr. McKay, Summerside; North-West Territories, Dr. Oliver, Medicine Hat.

Committees—Necrology—Drs. J. L. Davison, Stewart, Montreal; and Daniel, St. John.

Publication—Drs. Sheard and A. H. Wright, Toronto; George Ross, Campbell, Desrosiers. Fortier, Montreal; A. Morrow, Halifax; Pennefather, Winnipeg.

Ethics—The President, Secretary, and eight vice-presidents.

Arrangements—Drs. Bell, Roger, Lachapelle, Desjardins, Lamarche, and Shepherd, with power to add to their number.

Climatology—Drs. Oldright, Toronto; McGuiness, Edmonton; D. A. Campbell, Halifax.

Auditors—Drs. T. A. Rogers, Montreal, and A. A. Macdonald, Toronto.

Education and Literature—Drs. I. H. Cameron, Toronto; Chown, Winnipeg; Shepherd, Montreal.

Selected Articles.

ANÆSTHESIA.

An Address delivered before the International Medical Congress, Berlin, August 6, 1890.

BY H. C. WOOD, M.D., LL.D.,

Prof. of Therapeutics in the University of Pennsylvania.

The most brilliant modern achievements, in the direct saving of life, of the science and art of medicine are connected with surgery. These great achievements have been rendered possible by two epoch-making discoveries, antisepsis and anæsthesia. The long array of fatal cases of poisoning by carbolic acid, by iodoform, by corrosive sublimate, and by other antiseptic agents; the hundreds of deaths from chloroform, ether, and other anæsthetics, all bear witness to the verity of that strange law, in obedience to which the progress of the human race is so often at the sacrifice of the individual. Antisepsis has outgrown the dangers of its youth, and to-day the measures that are meant to save, very rarely kill. On the other hand, the death-roll of anæsthesia is daily added to; added to, according to my belief, at a rate that has not changed in forty years. Though this be true, from far-off Australia comes the news that jury and judge have condemned to heavy penalty a chloroformist who had lost his patient; and in old England itself, the leading medical journal lends support to such a verdict by affirming that "deaths from chloroform are preventable, that with due care they may be avoided," and that, therefore, when they occur, they are the result of ignorance or carelessness. Five hundred deaths and more—the result of ignorance or carelessness! Five hundred surgeons, including such names as Billroth, Jaeger, Simpson, McLeod, Agnew, Hunter, McGuire, and others of equal rank, guilty of manslaughter! And still the carnage goes on. Surely under such circumstances the subject of anæsthesia is worthy of the attention of even this, the most learned medical gathering of the nations that the world can furnish. Antisepsis, the gift of the Old World to humanity: anæsthesia, the gift of the New World, which made the fruits of antisepsis possible: surely it is fitting that I, standing here to-day before you all, as the representative of the newer civilization, should be the chosen mouthpiece for the renewed discussion of this old but pressing theme.

In attempting a fresh study of a well-threshed-out subject, I propose to take advantage of the modern physiological methods, and to endeavor to discover by experiments upon the lower animals how anæsthetics kill, and what drugs or measures are most powerful in putting aside their lethal effects. This brings us face to face with the question—How far is it possible to adapt experiments to the needs of practical medicine, and to reason from the dog to the man? A full discussion of this subject would not be opportune, but it does seem necessary for our purpose to devote a few minutes to the pointing out of certain general guiding principles.

It ought to be acknowledged as a fundamental axiom, that no amount of experiments can overthrow a clinical fact; although when a contradiction between experimental and bedside observation seems to arise, such contradiction challenges the correctness of the alleged clinical and experimental facts alike, and should lead to a careful re-examination. No amount of failure to purge a dog by eleatrium proves that eleatrium does not purge man; whilst, on the other hand, the discovery that digitalis increased the blood-pressure in the lower animal very properly led to doubt as to the correctness of the, at the time, general belief that digitalis acts upon man as a cardiac sedative, and finally to the recognition of the falsity of the clinical observation upon which such belief rested.

Whatever difficulties may beset the path of the experimental therapeutist, it is certain that law is throughout the universe supreme: that man, at least in his physical nature, is only an especially developed animal: and if drugs act differently upon different animals, such action must be in obedience to certain laws, to us known or unknown.

Any attempt to discuss fairly these laws would lead us too far afield for the present. One law, however, treads so closely upon the matter at hand this morning, that it requires statement. This law is, that when an apparatus or system is of similar function and of similar functional activity in different animals, the difference in the action of remedies is very rarely, if ever, in kind, though it may be in degree. Throughout mammalia the heart has one general structure, and one general function; the heart of the dog responds to the touch of digitalis precisely as does the heart of the man. The human brain is so much more highly developed than the brain of the lower mammal, that it is, in fact, a new organ or apparatus, and its relation to drugs changes with the change of structure and of function. The scope of this law in regard to anæsthesia is not far to seek. The functions especially compromitted in lethal anæsthesia are respiration and circulation. Surely these functions are similar throughout mammalia, and surely we ought to be able to reason safely concerning them, from the dog to the man.

Recently, however, alleged clinical facts have been challenged by high authority, upon the strength of experimental results. Under these circumstances, nothing must be at once aban-

doned, everything must be re-examined. These re-examinations I have made, and I may be pardoned, perhaps, if I affirm that a complete study of the clinical and experimental evidence brings out, not a discord, but a most beautiful concord—that concord between experimental and practical medicine which so often fails to appear simply because we cannot fit together the fragments of truth in our possession.

Although numerous substances have been tried, there are to-day in use, practically, only three anæsthetics—nitrous oxide, ether, and chloroform. Of these, nitrous oxide stands apart, because it produces loss of consciousness not by virtue of any inherent properties, but simply by shutting off from the nerve-centres the supply of oxygen.

It has been asserted that the changes of circulation produced by the inhalation of nitrous oxide are essentially different from those of mechanical asphyxia, and that therefore nitrous oxide does not act as an asphyxiant. It must, however, be borne in mind that the phenomena of mechanical asphyxia are largely due to the presence of an excess of carbonic acid in the blood, whilst in the asphyxia produced by nitrous oxide there is no excess of carbonic acid, so that the phenomena present are simply the outcome of a lack of oxygen. It is, therefore, *a priori*, to be expected that the phenomena of mechanical and of nitrous oxide asphyxia should differ to a certain extent. To determine the way in which nitrous oxide inhalation affects the circulation, I have, during the past winter, in connection with my assistant and friend, Dr. David Cerna, made a long series of experiments. The result has been to show that usually the inhalation is followed by a rise of the arterial pressure, accompanied by a great disturbance of the pulse; the pulse at first becoming irregular and tumultuous, but by and by settling, so that when anæsthesia is complete the pulse-wave is remarkably large and full, and the rate very slow. The rise and fall of the arterial pressure in nitrous oxide anæsthesia was found to vary remarkably, not only in different inhalations, but in different periods of the same inhalation. Sometimes the rise was sudden, sometimes it was slow and gradual: sometimes it was maintained until near death, sometimes it was interrupted very early: sometimes it was not very well marked, sometimes it was enormous. As illustrating it, I have the accompanying diagrams, accurately showing the curve of the blood-pressure obtained in four inhalations practised on three different dogs. (Fig. 1.)

In all our experiments respiration ceased while the heart was still in full activity. Indeed, instead of the gas acting as a cardiac depressant, it appeared to act as a cardiac stimulant, although it paralyzed the vaso-motor apparatus. Thus, during complete anæsthesia, faradic irritation of the sciatic nerve always failed to register itself in an increase of the blood-pressure, although the heart was beating very powerfully, and although the pneumogastrics had been previously severed: whilst late in the poisoning—at a time when the respiration had absolutely ceased, and the animal was in this respect dead, and without the power of self-recovery, and when the arterial pressure also had fallen almost to zero—the pulse-waves were frequently still nearly three times the norm. In evidence of this I append a reproduction of a tracing. (Fig. 2.)

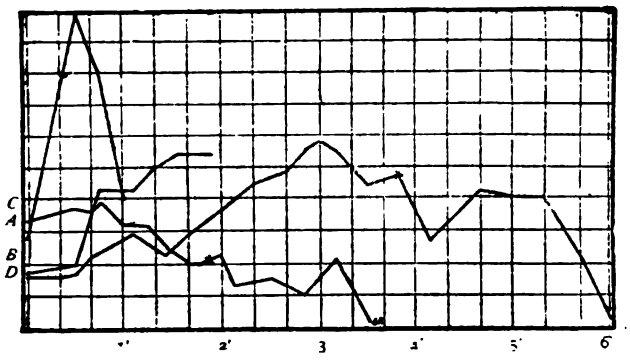

Fig. 1.

Plot showing effects of inhalation of nitrous oxide upon blood-pressure. *A*, first inhalation. *B*, second inhalation. *C* and *D*, inhalations in different dogs.

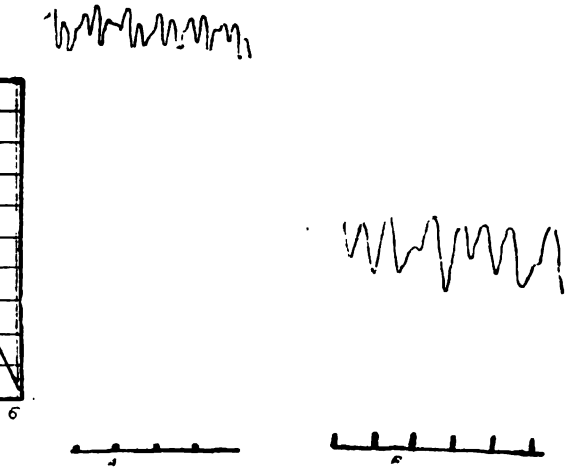

Fig. 2.

Figure showing the relative size of the pulse-waves in nitrous oxide anæsthesia. Tracing *A*, before inhalation. Tracing *B*, after breathing had stopped.

We made but few experiments as to the action of artificial respiration upon the animal dying from nitrous oxide, but these experiments proved that even after complete paralysis of the respiratory function, artificial respiration is capable of rapildy bringing the animal back to life. The heart lives on through nitrous oxide anæsthesia long after the respiratory function has been abolished, and even when the strong, full pulse fails, and the heart has almost ceased to quiver, recovery is still hopeful, because the loss of function has been caused, not by the presence of a poison, but by the absence of oxygen; and although the paralysis may be complete, the life-power sleeps before it dies, and is ready to awake at the touch of fresh oxygen.

These experimental results are in strict accord with clinical observations. The S. S. White Dental Manufacturing Company supply a very large, if not the largest, portion of the apparatus and material used for the administration of nitrous oxide in the United States; and, in answer to my inquiry, Dr. J. W. White, their President, writes me that a computation based upon their own sales, and a knowledge of those of their rivals, has reached "the somewhat appalling result, that anæsthesia by nitrous oxide gas is probably effected in three-quarters of a million of cases annually in the United States." Most of these inhalations have been given, not by trained physicians, but by comparatively untrained, and often very ignorant dentists; have been given to patients in a sitting or semi-sitting posture; have been given apparently without thought or care to the general community, as the units present themselves, to the healthy and to the diseased alike; and the result is, out of many millions of inhalations only three deaths recorded as directly due to nitrous oxide! Could anything be safer?

A suggestive and very practical fact which came out in our experiments, is that sometimes during an inhalation of nitrous oxide the rise of the arterial pressure is extraordinary and abrupt. Not long since, in the city of Philadelphia, a gentleman arose from the dentist's chair after an inhalation of nitrous oxide, staggered, and fell in an apoplexy. Is it not easy to perceive that when the arterial system is diseased, the great strain of a sudden rise of blood-pressure may produce rupture?

Some years since, Dr. Kenderdine, a Philadelphia surgeon of local note, died of diabetes, which he insisted was produced in him by the inhalation of nitrous oxide. This is in accord with the researches of the French physician Dr. Lafont, who reported a case in which sugar appeared in the urine twice in a patient, after inhalation of the gas; and who also caused in himself, and in dogs, temporary glycosuria by such inhalations. Further, Dr. Lafont noticed in a case of mitral insufficiency temporary albuminuria.

I am not aware that these very suggestive statements of the French physician have given rise to any research, except five experiments made recently upon healthy men, with negative results, by two medical students of the University of Pennsylvania, Messrs. George S. Woodward and Alfred Hand, Jr. I do not believe that ordinarily the inhalation of nitrous oxide is followed by sufficient disturbance of the circulation to register itself in the urine, but the negative evidence of Messrs. Woodward and Hand is not sufficient to render it improbable that in exceptional cases the inhalation of nitrous oxide may produce albuminuria or glycoscuria. Such phenomena, if they occur, are in all probability not directly produced by the nitrous oxide, but are due to the disturbances of capilliary circulation caused by it.

However these facts may be, it seems to me that great caution should be used in the administration of nitrous oxide to persons the coating of whose arteries is diseased, and it is probable that when widespread atheroma exists, ether is a safer anæsthetic then nitrous oxide.

When respiration has been suspended in nitrous oxide anæsthesia the overwhelming indication is certainly for the employment of artificial respiration.

Notwithstanding the great safety and the many advantages which attend the anæsthetic employment of nitrous oxide, the gas can never be used for the general purposes of the surgeon, on account of the excessive fugaciousness of its influence.

The perfect anæsthetic will be a substance which has the power of paralyzing the sensory nerve-trunks without affecting other functions of the body. If such drug exist, it yet awaits the coming of its discoverer. Probably until such a sensory nerve paralyzant is found, choloform and ether will maintain the complete supremacy which they now have; and in the further discussion of my subject I shall confine my remarks to them. Lack of time limits the discussion to:

First. The method in which these two drugs kill, both in man and in the lower animal; that is, whether they destroy life through the circulation or the respiration.

Second. The comparative fatality attending the use of these two agents, and the reason for the difference.

Third. The comparative disadvantages between the two agents, and the best method of securing the desired result.

Fourth. The treatment of accidents occuring during ether or chloroform æsthesia.

In regard to the method in which anæsthetics kill, my own teaching hitherto has been: first, that although ether in moderate doses acts as a stimulant to the circulation, yet in overwhelming amount it is capable of depressing the heart, but that such depression of the heart is always less

than the depression of the respiration, and therefore, ether kills always through the respiration; second, that chloroform may produce death by paralysis of the respiratory centre, or by a simultaneous arrest of respiration and circulation, but that primary paralysis of the heart may occur, and is especially prone to do so when the chloroform vapor has been given in concentrated form.

I think that these views are in accord with general professional belief, but it has recently been alleged that they are at variance with experimental evidences, so that a re-examination is necessary. What then are the clinical facts?

If any credence is to be attached to the statements of competent witnesses, who have recorded human deaths during anæsthesia, it is certain that in some cases, under the influence of chloroform, the pulse and respiration have ceased, simultaneously; whilst in other instances the respiration has failed before the pulse; and in still other cases the pulse has ceased its beat before the respiratory movements were arrested.

Usually ether arrests respiration in man before it paralyzes the heart, but the collection of records made by Dr. J. C. Reeves certainly shows that the fatal result may be produced by syncope. Thus Dr. Ernest H. Jacobs, in a report of a fatal case, asserts positively "the pulse ceased, the breathing continued." It would seem that we must admit that ether in the human subject may cause death in the same methods as does chloroform.

Such then are the clinical facts; or in other words, such are the results of observations made upon the human subject. What are the results of observations made upon animals?

The general teaching in regard to chloroform has been recently challenged by Dr. Lauder Brunton, who, of the result of 450 experiments made by himself upon the pariah dogs of India, has reached the conclusion, published in the London *Lancet*, that however concentrated the chloroform may be it never causes death from sudden stoppage of the heart. In the physiological laboratories of the University of Pennsylvania, for some years, several hundred dogs have been annually used, and a very large proportion of these dogs have been, at the end of an experiment, killed by chloroform. The observations of Dr. Reichert, Professor of Physiology in the University, Dr. H. A. Hare, Demonstrator of Therapeutics, and myself, have been concordant in showing that chloroform is a cardiac paralyzant, and often does kill dogs by a direct action upon the heart or its contained ganglia. The statements made concerning the Hyderabad Commission, however, led Dr. Hare and myself to a thorough and careful restudy of the subject. Some of our experiments were made by injecting chloroform into the jugular vein; others by administering it by inhalation in the usual way.

The action of the chloroform seems to be not seriously modified by the method of administration. We definitely proved that in the dog, chloroform has a distinct, direct, paralyzing influence on both respiration and circulation; that the respiration may cease before the heart-beat, or the two functions be simultaneously abolished; but that in some cases the heart is arrested before respiration.

We have several times seen the respiration continue as long as one, and even two minutes after the blood-pressure has fallen to zero, and the pulse has completely disappeared from the carotid artery.

The correctness of our experiments, we claim, must be acknowledged. The experiments have not only been witnessed by a number of persons, but I have with me to-day tracings which I will gladly show anyone especially interested in the subject. I do not desire to express any doubt whatever as to the correctness of the experimental data of Dr. Brunton; I simply claim that both sets of experiments, although they have yielded different results, have been correctly and properly performed. It may be that the high heat or other climatic conditions surrounding the pariah dog make his heart less sensitive to the action of chloroform than is the heart of the dog bred in Northern climates. That the thought of the different constitutions of animals in different climates is not absurd, is shown by the fact that some years ago, after I had affirmed before the Physiological Section of the International Medical Congress at London, that if certain asserted results were obtained upon European dogs, said dogs must differ from those of America, and had been met with a smile of incredulity, Dr. Brown-Séquard rose and stated that he had experimented upon hundreds of dogs on both continents, and that there was a distinct difference between the animals, the vascular system of the European dogs being much more developed, and operations upon them being, therefore, much more bloody than was the case with the American dog.

A very curious parallel might be traced at this point between the experimental and clinical evidence in regard to the effect of climate upon the action of chloroform. In the Southern United States chloroform is used with great freedom, and with great alleged safety; and as long ago as 1878, Dr. Landon B. Edwards, editor of the *Virginia Medical Monthly*, wrote: "It is one of the most peculiar facts I have ever known in medical practice—the difference of experience in Europe and the North, with chloroform and ether, as compared with that of the South—the high rate of mortality in the North, and the low rate in the South.

In a series of experiments which I have recently made to determine the changes in the circulation produced when ether anæsthesia is carried on to

death, I have found that in the first periods of anæsthesia the blood-pressure is usually elevated, and that it is usually quite high at a time when the respirations are very shallow and imperfect, and the dark color of the blood shows that it is heavily charged with carbonic acid. It is not, however, very rare for the blood-pressure to remain near the norm, and I have seen the blood-pressure begin to fall in the very first stages of ether anæsthesia; moreover, in at least two experiments death occurred from syncope, the respiration continuing for one or two minutes after the complete cessation of the circulation. In an experiment in which the fall of the blood-pressure was most pronounced, and the arrest of heart most complete, the dog was sick from the mange, and it is possible that the weakened heart was more susceptible than is the normal heart to the depressing influence of ether.

Fig. 3.

Tracing showing respiratory movements, *B*, registered one and a quarter minutes after circulation had fallen as shown in *A* during death from ether in the dog.

So far, then, as concerns the method in which ether and chloroform kill, I claim most urgently that there is no contradiction between the results as obtained by the bedside and in the physiological laboratories, and that a complete, broad study of the clinical and experimental evidence leads to one conclusion, namely, that chloroform and ether are capable of paralyzing the respiration and the circulation; that in some cases one function, in other cases the other function, is primarily arrested; but that ether is less prone to produce a primary arrest of the heart than is chloroform.

In the discussion of the second point which I have raised, namely, the comparative fatality attending the use of ether and chloroform, I shall not occupy time with any elaborate setting-forth of the clinical evidence. In regard to the number of recorded deaths, I shall content myself with accepting the latest statistics at hand, namely, those collected by Dr. Laurence Turnbull, who has found 375 deaths reported from chloroform, and 52 from ether. I do not believe that these figures nearly represent the total mortality; I doubt very much whether one-third of the deaths from anæsthesia are reported; certainly not one-third of the cases I have had personal knowledge of have been publicly recorded. Moreover, the pressure to conceal deaths from chloroform is greater than when the lethal result is due to ether. The surgeon who uses ether feels that he has employed the safest anæsthetic, and that he will receive no blame if a death occurs from it, and feels also that he has a rare case to put on record, which will give his own name a permanent place in anæsthetic literature; whereas the surgeon who uses chloroform knows that if death occurs from the anæsthetic, a very large proportion of the profession, at least in the United States, will condemn him either in public or secret, for the use of this drug, and that he will be fortunate if he escape being publicly condemned by a coroner's jury. Moreover, deaths from chloroform are only too common, so that the surgeon has nothing to gain and much to lose by publication of a chloroform death, and if possessed of the average human nature, holds his peace. The Coroner's Physician of Philadelphia, Dr. Formad, informs me that he has made autopsies in 15 cases of ether death, only 3 of which have been reported in medical journals; how many chloroform deaths have been lost in eternal quiet?

It seems to me impossible to get at the exact number of anæsthetic deaths, or the proportionate fatality of ether and chloroform. Lyman considers that in regard to chloroform, the ratio of deaths to inhalations is 1 in 5860; Richardson, that it is 1 in 2500 to 3000. Andrews puts it for ether, at 1 in 23,204; and Lyman, at 1 in 16,542.

Without claiming strict accuracy for any of these figures, I think it can be asserted that the ratio of deaths from chloroform is probably at least four or five times that of deaths from ether.

When we come to study the effects of chloroform upon the lower animals, we find that it varies very distinctly in its action on the different species. The cat seems to withstand the fatal influences of chloroform with a power worthy of its reputed "nine lives." Many years ago, Professor Schiff called attention to the fact that the use of chloroform as an anæsthetic in the dog is usually attended with the loss of many animals. Professor Martin, of the Johns Hopkins University, writes me that the margin between complete chloroform anæsthesia in the dog, and chloroform death, is a very narrow one. This certainly is our experience in the University of Pennsylvania; we have never been able to use chloroform as an anæsthetic without losing a very large proportion of our dogs.

Clinical and experimental results—*i. e.*, the results of experiments made in the physiological laboratory upon the lower animal, and the results of experiments made in the amphitheatre upon the higher animal, Man—are again concordant. Chloroform is much more inimical than ether to animal life. The cause of this singular fatality is not, however, chiefly the cardiac action of chloroform. Chloroform is more apt to cause cardiac arrest than is ether, but it is also much more prone than is ether to cause death by failure of the respiration. Almost invariably, when ether is withdrawn before the dog is absolutely in the grasp of death, recovery occurs; but over and over again I have noticed that although the chloro-

form was taken away whilst the respirations were still being mantained with regularity, the arterial pressure much above zero, and the pulse very apparent, yet the symptoms of cardiac and respiratory failure continued to increase until the fatal issue was reached.

It seems to me that certain general facts or principles in regard to anæsthesia must be considered as established:

First, that the use of any anæsthetic is attended with an appreciable risk, and that no care will prevent an occasional loss of life.

Second, that chloroform acts much more promptly and much more powerfully than ether, both upon the respiratory centres and the heart.

Third, that the action of chloroform is much more persistent and permanent than is that of ether.

Fourth, that chloroform is capable of causing death either by primarily arresting the respiration, or by primarily stopping the heart, but that commonly both respiratory and cardiac functions are abolished at or about the same time.

Fifth, that ether usually acts very much more powerfully upon the respiration than upon the circulation, but that occasionally, and especially when the heart is feeble, ether is capable of acting as a cardiac paralyzant, and may produce death by cardiac arrest at a time when the respirations are fully maintained.

Chloroform kills, as near as can be made out, proportionately four or five times as frequently as does ether; partly, no doubt, because it is more powerful in depressing the heart, but largely because it lets go its hold much less rapidly than does ether when inhalation ceases. Is it not possible that this "holding on" is because it is less volatile than ether, and can we not here get a hint why chloroform is less deadly in the South than in the North? The diffusibility of vapors or gases is in inverse proportion to the square of their densities, and the vapor of chloroform would certainly diffuse itself with far greater rapidity at 90° F. than at 70° F.

The comparative advantages and disadvantages of the two anæsthetics in practical medicine, are so well known, that only one or two points seems to force themselves upon our present attention. I cannot see that the surgeon is justified in putting the life of the patient to the unnecessary risks of chloroformization, except under special circumstances. I believe, moreover, that much of the unpopularity of ether is due to its improper administration. It is so easy to embarrass the respiration seriously by the folded towel, as commonly used, that not only are the struggles of mechanical asphyxia almost invariably produced, but probably death itself is sometimes caused. Especially is there danger of death being thus caused mechanically in the advanced stages of etherization, when the patient is too thoroughly etherized to struggle, and when the attention of the etherizer is, it may be, attracted by some novel and difficult operation. I myself confess to having once nearly killed a patient in this way.

A proper apparatus is certainly preferable to the folded towel. Various apparatus have been invented, but as the time is short I shall only mention one—one which seems to me a practically perfect mechanism, although it is probably little known this side of the Atlantic.

The inhaler invented by Dr. O. H. Allis, is based upon the theory that the patient to be etherised should be supplied with a full abundance of air, saturated with the vapor of ether. It consists essentially of a series of foldings of muslin on a wire framework, arranged almost like the gills of a fish, so as to allow the air to pass freely through, but everywhere to come in contact with ether. It should be placed upon the face of the patient dry, and the ether gradually poured on from a bottle with an especially prepared cork, known in Philadelphia as the "polyclinic" bottle. When properly used the Allis inhaler practically does away with the sense of suffocation, and the consequent struggles which have made etherization alike so repulsive to patient and surgeon.

In order to determine the rapidity with which etherization can be produced by this inhaler, Dr. M. H. Williams kept for me notes of thirteen consecutive cases in the clinic of the Jefferson Medical College Hospital in Philadelphia. The average time required for the production of complete unconsciousness was eight minutes. The average time during which anæsthesia was fully maintained, was thirty two minutes; and the average amount of ether used during this time was 7½ ounces. In twenty-one surgical cases occurring this spring in the clinical service of Professor J. William White, of the University of Pennsylvania, the average time for the production of complete anæsthesia with ether, used through Allis's inhaler, was seven and nine-tenths minutes. The results arrived at in these two clinics are so close that eight minutes must be considered the average time required for full etherization by this apparatus.

In discussing the treatment of the accidents of anæsthesia, the results obtained at the bedside naturally press forward for careful consideration, but in going over the subject from this point of view, I have found so little that was novel, and so little that was satisfactory to myself, that I shall not occupy the time of this Congress with any conclusions drawn from reported cases, or personal experience in chloroform accidents. I do not think myself that the problem can be solved by any such study of cases. Death is so near and so terrible, time is so absolute, moments so important, that no surgeon would be willing or justified in waiting for the effect of any one remedy; and

when a man is dosed with alcohol, nitrite of amyl, hypodermic injections of ether, digitalis, atropine, and other powerful agents; faradized, slapped, douched, stood on his head, subjected to chest movements for artificial respiration, and to various other measures too numerous to mention; who can tell, if by chance he recover, why he has done so? or who can point out, if by chance he die, what is the remedy whose omission or commission has led to the fatal result?

The problem is a very complex one, not to be worked out amidst the excitement and responsibilities of the amphitheatre. Only in the physiological laboratory can its various elements be separated and studied each by itself, without regard to the individual life which is at stake.

In the physiological laboratory two distinct paths open, each promising to lead to some positive knowledge. We may, on one hand, enter upon the study of the minimum fatal dose of the anæsthetic, and of the results by the concurrent or subsequent administration of its supposed physiological antagonist; or we may investigate the effect of remedies upon functions that are failing under the influences of the anæsthetic.

The objections to the first of these methods have been, in the present instance, overwhelming. The accidents seem to be independent of the amount of anæsthetic inhaled; and such a method of investigation would have required far more time than was available after I had had the honor of being asked to address this body. Death is produced by chloroform and ether through paralysis of the respiration and the heart, and the method of experimental study which I have employed consisted in a study of the action of powerful agents upon these functions when oppressed by chloroform. I have selected chloroform chiefly because it is the more powerful agent of the two anæsthetics, and the more certain in its lethal results.—*Med. News.*

(To be Continued.)

ON THE PRINCIPLES OF THE TREATMENT OF DIABETES MELLITUS.

The first point to be considered in discussing the treatment of diabetes is the rationale upon which it should be conducted. A certain deviation from health resulting in the escape of sugar with the urine constitutes the condition that has to be combated, and something requires to be said regarding the nature of the deviation before we are in a position to approach the question of how it should be treated.

The observable phenomena are that, whilst in the healthy subject the food ingested is disposed of in such a manner within the system as not to lead to the exit of sugar from it, in the diabetic subject the food fails to be similarly disposed of, but in part passes out as unconsumed and wasted material with the urinary excretion. It is with the carbohydrate principles that the faulty action lies. These, instead of passing in the direction that results in their consumption and utilisation, and thus disappearance within the system, as occurs in health, do not follow such a course, but remain in the state of carbohydrate, and are eliminated as such. The chemistry of the body with regard to these principles is at fault. The proper changes do not take place to lead to their being employed as they ought to be, and thereby lost sight of. Represented in other words, through defective assimilative action these principles do not pass on, it may be said, to their proper destination.

Thus much is learnt by simply looking at the matter through the light of ingress and egress.

There is no theoretical consideration involved in stating that the carbohydrates in the system of the diabetic fail to undergo those right chemical changes which, in health, lead to their disappearance, and that consequently, whether ingested from without, or formed from the splitting up of nitrogenous matter within, they become disposed of by egress with the urine.

It may further, I consider, be stated that, as a result of the faulty action, the carbohydrate, in the form of sugar, reaches the general circulation in a manner it ought not. No one with any ground of support can contend that the sugar eliminated is formed by the kidney. Whatever appears in the urine has previously existed in the blood flowing to the organ, and osmosis suffices to account for the escape that takes place. I am of opinion it has satisfactorily been made out that healthy urine contains a certain small amount of sugar, and this stands in accord with what is observed as regards the condition of the blood under natural circumstances.

With regard to the presence of sugar in ordinary urine, I conducted a series of observations some years ago, in which I precipitated the sugar by means of lead acetate and ammonia, after previous separation of the uric acid by lead acetate alone. The compound of sugar and lead oxide was then decomposed by sulphuretted hydrogen, and the sugar estimated gravimetrically by boiling with the copper test liquid, collecting the precipitated cuprous oxide, and subsequently, by the aid of a galvanic current, depositing the copper upon a weighed platinum cylinder. The amount found varied from 0.96 to 0.533 parts of sugar per 1,000 parts of urine.

The condition of the blood, as regards sugar, can be with precision defined by the application of a satisfactory analytical procedure which exists at our command. There is no difficulty, with the exercise of proper attention, in securing the full extraction of whatever sugar is present in a given

specimen of blood, and afterwards expressing its amount. From a large number of observations, I may state that the quantity of sugar in blood taken under natural conditions does not amount to more than from about 0.5 to about 0.8 per 1,000. Under deviations from the natural state the quantity may be quickly made to rise higher, and this, it may be said, should be borne in mind in looking at results where larger quantities are mentioned by investigators as having been found. I have made analyses of the blood obtained from persons suffering from diabetes, and have a record of seven instances. A general agreement is distinctly recognizable between the amount of sugar escaping with the urine and that found in the blood. Taking one instance, where 750 grammes of sugar were eliminated with the urine in the twenty-four hours, the blood contained 5.763 per 1,000; whilst in another, with 27 grammes in the urine for the twenty-four hours, the amount in the blood was 1.543 per 1,000. These are the examples giving respectively the highest and lowest figures of the series, both for urine and blood. It is correct to state that the condition of the urine as regards sugar affords an index of that of the blood. This is only what might be expected, seeing that sugar is a diffusible substance, and that therefore in proportion to its presence in the blood so may it be looked for in the urine. As its presence to more than an exceedingly minute extent is abnormal to the urine, so the same may be said of the blood, and its presence in the blood to the extent occurring in diabetes means the existence of an unnatural state of this fluid, which induces a deviation from healthy action throughout the system. In proportion to the extent of this deviation from the healthy state—that is, in proportion to the amount of sugar reaching the general circulation and thence passing out through the kidney—so will stand the measure of severity of the symptoms of diabetes. Looked at broadly, it may certainly be stated that the larger the amount of sugar eliminated with the urine the worse, in every direction, is the condition of the patient suffering from diabetes.

We thus trace the symptomatic phenomena of the disease to the abnormal condition occasioned by the presence to an undue extent of sugar in the general circulation.

Whence, it may be next asked, arises this abnormality? I must not enter too far into the discussion of this matter, but the question has a distinct bearing upon the basis of treatment, and therefore requires to be touched upon to a certain extent.

I doubt not it will be conceded by all that the object to be attained by treatment is to diminish the deviation from health as far as practicable. It is only a rational procedure to endeavor to establish and maintain as close an approximation to the healthy standard as our knowledge enables us to effect. Observation shows that the amount of error as regards sugar in the blood, and, following upon this, sugar to be discharged with the urine, is in proportion to the amount of carbohydrate principles, of what ever kind, ingested. It may be said in general terms without, as I have already stated, asserting anything outside the region of fact, that the nature of the error to be dealt with consists in a failure of the power in the system to dispose of the carbohydrates in a manner to lead to their utilization and disappearance. But now arises the question, to what kind of faulty action is this failure to be attributed? Two points of view present themselves for consideration. We start with the fact that sugar is present in the blood to an extent that is unnatural. Is this due to sugar reaching the general circulation in a manner that it ought not? Or is it to be regarded as natural that all the sugar eliminated in diabetes should reach the general circulation, the error consisting of its not undergoing subsequent destruction, thus leading to accumulation?

It would be out of place to discuss these propositions here. The view to be taken rests on physiological considerations. It is known that I have over a long space of time given close attention to the matter, and my experimental inquiries lead me decidedly to affirm that I consider the source of the sugar encountered in the blood and eliminated in diabetes to be attributed to its being permitted to enter the general circulation in a manner that it ought not. This view harmonizes fully with the phenomena observed in diabetes. In health, I should say, the opportunity is not afforded for the ingested carbohydrates to appear in the urine, for the reason that they are not permitted to pass through the liver and reach the general circulation. In diabetes, on the other hand, we know that they do reach the general circulation in the form of sugar, and from the amount of this principle to be found in the urine it can be stated that they must do so in proportion to the amount ingested. I would, therefore, say that we have here to deal with a failure of power —assimilative, or whatever else it may be called —to arrest the passage of carbohydrates through the liver. Being thus permitted to reach the general circulation, they are placed in a position to be discharged with the urine, and hence, according to the amount of carbohydrate principles ingested, so is the amount of sugar eliminated. With such a state of things existing, elimination necessarily follows upon, and is proportionate to, ingestion, and leads to the production of a result which is found to stand in harmony with observation.

I have spoken of ingested carbohydrate being checked by the liver from entering the general circulation as constituting what occurs under

conditions of health, and I do not make this statement unsupported by the information afforded by experiment. I have conducted a large number of experiments upon the point, and can say from them that when the requisite precautions are observed, to obtain a representation of the natural condition of the blood of the systemic, or general, and of the portal circulation, a large preponderance of sugar is encountered in the blood of the portal vein, if the observation be made at a period of digestion and after the ingestion of food freely containing carbohydrate matter. But it is necessary to bear in mind, if the estimation of the sugar be effected, as is the common practice, with the copper test, that a fallacy may arise from the following circumstance, unless measures are taken to guard against it. With the transformation of starch in the alimentary canal, preparatory to absorption, it is not, certainly to any noteworthy extent, carried higher than maltose, which, as is known, has a cupric oxide reducing capacity of 61, as compared with glucose at 100, and much of it is only carried into a dextrin with a lower cupric oxide reducing power still. Hence the form of carbohydrate, derived from starch, which reaches the portal system, does not possess the cupric oxide reducing capacity of glucose, but something more or less considerably below it. As an actual fact I have a recorded instance in which the product contained in the portal blood after the ingestion of starchy food possessed a cupric oxide reducing power standing as low as 21, as compared with glucose at 100. In this instance, if reliance had been placed upon the ordinarily conducted method of estimation, the amount of carbohydrate present would have been expressed at only about one-fifth of what it really was. With a form of carbohydrate other than glucose existing, it is necessary to bring it into glucose by boiling with dilute sulphuric acid, to permit of the true amount being determined, and this has been the plan of procedure of late years adopted in the researches I have conducted.

I have considered it necessary to enter into these preliminary details. They display the nature of the faulty condition that has to be dealt with by treatment. Sugar reaches the general circulation in a manner that it ought not, and to its presence in the system are due the various symptoms belonging to diabetes. Through reaching the general circulation it becomes eliminated by the kidney and is lost. The disease thus involves a sacrifice of material which ought by rights to be turned to account, but this is a point that has but little bearing on the production of the phenomena that are observed in connection with the disease. If it were only a question of waste of the carbohydrate principles of food there would be no reason against their being taken and allowed to run off. Provided a sufficient amount of other alimentary principles were consumed to meet the requirements of life, no particular harm need arise from the sacrifice of the material occurring. What, it may be said, in reality inflicts the harm is the altered constitution of the blood, occasioned by the presence in it of the sugar which passes through the system to the urine. In proportion to the largeness of the amount of sugar thus traversing the system in the blood so will be the extent of deviation from the natural state, and so in correspondence the impairment of health that will be found to exist.

The class of case to which these remarks apply is that in which the discharge of sugar is susceptible of control by treatment, and the class embraces the majority of the cases in which the disease sets in after the middle period of life.

In such instances, starting with the ingestion of carbohydrate, there follows, briefly summarized, as a consequence of the want of proper transformative, or assimilative power within the system, an accumulation of sugar in the blood attended with its discharge by the urine. Accumulation of sugar in the blood leads to the production of symptoms proportionate in severity to the deviation from the natural state. The plain object before us is to reduce this deviation as far as is found to be possible.

We cannot be wrong in endeavoring to attain as close an approach to natural conditions as circumstances permit If the chemistry could be set right, and sugar be prevented reaching the general circulation, the disease would be removed; but it may not be possible to restore the transformative, or assimilative power which has become impaired or lost, and then the only way of arriving at what is wanted is to withhold from introduction into the system the alimentary principles, which, owing to failure of power to properly dispose of them, cannot be of service, and which, by leading to the passage of sugar through the system, establish an unnatural condition, and thereby inflict positive harm.

As long as the passage of sugar through the system is prevented no harm takes place. In the course of all my experience in diabetes, I have never known anything serious to arise as a part of the disease so long as the urine has been kept free from sugar. There is nothing, in fact, to form the source of trouble, seeing that there is not the abnormal presence of sugar in the circulation to occasion deviation from the healthy state. On the other hand, when sugar is passing through the system, and the remark applies in proportion to the amount passing through, not only are there to be observed the symptoms ordinarily consequent thereon, but a constant state of insecurity exists, from the danger of the supervention of the serious issues known to follow upon disease. Moreover, with the unnatural state occasioned by the pres-

ence of sugar, nutritive action is not carried on in such a manner as to properly maintain the general strength. As a consequence, the general power becomes sapped, or prematurely exhausted, and the system weakened and rendered less able to resist the effect of pernicious influences. Such is not the position when sugar is not similarly traversing the system. Indeed, there is nothing to render the state essentially different from that ordinarily existing.

The contrast between the two conditions—that is, where sugar is allowed to abnormally exist in the system, and where it is prevented from doing so—is well shown in cases where the disease has run on for some time without being recognized, and is subsequently controlled by dietetic treatment. What will be observed in such instances will be a gradually advancing impairment of health and increasing severity of the symptoms of the disease; and it is right to assume that progress in the same direction would run on, and the patient grow worse and worse, if the condition continued to be left to itself. Whilst matters are thus proceeding, it happens, say, that the existence of the disease becomes recognized, and, if the case be such that the sugar is susceptible of being removed from the urine by the exclusion of the carbohydrate principles from the food, and this exclusion be carried out, this alone will suffice, not only to check the downward progress occurring, but to bring back health and strength to the patient.

The first consideration, therefore, in the treatment is to control by dietetic measures the passage of sugar through the system. The real point, however, to be aimed at is to restore the assimilative power over the carbohydrate elements of food; and until this has been accomplished it cannot be said that a cure has been effected, but only that the disease is held in subjection, and prevented, as long as the condition can be maintained, from leading on to an unfavorable issue. What most conduces to this desired restoration of assimilative power is the maintenance of a normal state of the system by keeping it free from the passage of sugar through it, and in this way bringing a healthy condition of body to bear in helping to promote a removal of the faulty state.

According to my own experience, opium and its derivatives, codeine and morphine, are the medicinal agents which, more than any others that I know of, assist in the actual cure of the disease, by which I mean a restoration of the assimilative power which has been impaired.

The influence of these agents may be witnessed in cases where the sugar has been brought down by diet to a certain point, but is insusceptible of entire removal from the system by dietetic treatment alone. The complete removal may then be sometimes observed to follow the subsequent administration of the drug, showing that the medicinal agent has acted in the direction of exerting a restraining influence over the abnormal production and elimination of sugar.

When cases of a favorable nature, that is, cases occurring above the middle period of life, are treated by these combined measures, and the treatment is steadily carried on for some time, it is a matter of common observation that the system of the patient becomes able to tolerate a certain amount of carbohydrate food, without it leading to the elimination of sugar. Often, with strict observance of the required treatment, the assimilative power is found to become so far re-established, that a fair amount of the carbohydrate principles, or even an ordinary diet, may be taken without leading to the elimination of sugar. When this is the case, carbohydrate principles, according to the extent found to be tolerated, may be taken without occasioning harm; but the object is to keep below the point at which the escape of sugar takes place, and when this is done actual benefit, instead of injury, is derived therefrom.

Here I may refer to the aid afforded by the quantitative testing of the urine. It is absolutely essential, I consider, in the management of a case, to possess the knowledge thus supplied, not only for the purpose of regulating the treatment according to the progress made, but also for keeping a check upon the manner in which the directions given are being carried out. When in a case it is found to happen that the assimilative power has been restored, it is permissible to consider that an actual cure has been effected; but it is always requisite to bear in mind that a weak point has existed, and that it is advisable to avoid unduly taxing a power which has previously given evidence of being at fault.—Dr. Pavy in *Br. Med. Jour.*

CARDIAC DYSPNŒA: ITS PATHOLOGY AND TREATMENT.

The dyspnœa of cardiac affections is either mechanical or toxic, or both. In the toxic forms it may exist independently of any appreciable affection of the respiratory passages by the simple fact of spasm of the arterioles; in the mechanical forms its essential condition is blood-stasis in the lungs; in all cases it may co-exist with bronchitis and emphysema.

In stenosis or insufficiency of the mitral the dyspnœa is largely, if not altogether, mechanical, being due to pulmonary engorgement. In the earlier stages the dyspnœa may be but slight, and only felt on active exercise (the dyspnœa of exertion); the heart may be quite competent to clear its cavities, except when an extra task is put upon

it ; in the later stages engorgement is constant and the dyspnœa permanent.

In the incipiency of aortic regurgitant disease, dyspnœa of a mechanical character is a frequent symptom ; any sudden violent exertion may put the patient in agony for breath ; the left ventricle is only able to clear itself during rest or moderate exercise. When the disease is advanced and compensation is broken, the dyspnœa may be constant, as in mitral disease ; in fact, the cardiopathy is likely to be complicated with mitral lesion ; it more often happens, however, that the dyspnœa is paroxysmal, coming on at night, thus resembling true asthma. The dyspnœa of fatty degeneration, of chronic myocarditis (fibroid heart), or dilatation, from whatever cause, ordinarily assumes this paroxysmal character, though always produced or aggravated by exertion. The same remark is applicable to the dyspnœa of aortitis and arteriosclerosis, pathological states to which attention has been much called of late, since the publication of Huchard's able work. Various factors concur in the production of this paraoxysmal dyspnœa. The dyspnœa may be purely mechanical, being provoked by any exertion that fatigues the heart, any condition or position of the patient that embarrasses the heart's action. The paroxysmal dyspnœa of aortic disease, of myocardial degenerations, etc., which is so prone to come on in the night-time, waking the patient out of his first sleep, compelling him to sit up and tug for breath, has been attributed to the recumbent posture, the stomach and viscera, especially after a full meal, being forced upward with the diaphragm and encumbering the heart's area. Moreover, any concomitant bronchitis and emphysema is likely to be aggravated in the night-time and when the heart is fatigued.

The above explanation of the pathogeny of the paroxysmal dyspnœa does not quite satisfy Huchard, who sees in this dyspnœa a phenomenon of arterial hypertension : "*Selon moi le pseudo-astheme aortique est du à la hypertension arterielle; or, celle-ci est augmentée par la station horizontal et sous l'influence du sommeil, comme elle s'élève aussi par l'effort de la marche et du mouvement.*"*

This hypertension greatly augments the peripheral resistances against which the heart has to contend, producing a spasmodic condition of the arterioles, which is more or less constant. Now aortic disease, according to Huchard, is very generally associated with a peculiar diathesis called *arterio-sclerosis*, which manifests it self by more or less general atheroma or sclerosis of the blood-vessels. The kidneys sooner or later, participate, undergoing slow degeneration, and becoming incompetent for their function ; the blood poisoned by retained waste products, irritates the lining membrane of the arterioles, still further augmenting the hypertension. Hence, the dyspnœa of aortic degenerative disease is not only mechanical, it is also toxic, owing to the impermeability of the renal emunctory.

The same explanation is applicable to degenerative diseases of the myocardium dependent on arterio-sclerosis.

In the treatment of cardiac dyspnœa the reading indications are, 1, to make the heart competent for its work ; 2, to calm nervous perturbation ; 3, to eliminate toxic elements which may be the cause of the dyspnœa.

The first indication is likely to be very difficult of fulfilment. The dyspnœa is generally a symptom of failing compensation, and digitalis, strophanthus, and other heart tonics confer only temporary, and more or less uncertain, benefit. The heart cannot by any medication be made sufficient for great tasks, and the best that can be done is to adapt the work to the capacity of the heart. In the early stages of mitral disease the dyspnœa is only felt on exertion ; the patient should be enjoined to work moderately and tax the heart as little as possible. Persistence in labor of an arduous kind is sure to overcome the heart and precipitate all the evils of uncompensated dilatation ; while it is possible that rest and a judicious antirheumatic medication; (iodide of potassium and the alkalies) may stay any further progress of the endocardial lesion which spoils the valves, and favor the supervention of a compensatory hypertrophy. The same may be said of the endocardial lesions, and consequent dilatation and dyspnœa, attending aortic regurgitant disease, which is often a rheumatic affection, though it may accompany or follow any of the iufectious fevers.

The diet should be of a nutritious and digestible character, consisting of nitrogenous aliments rather than of carbohydrates. A diet largely of meat or fiish is more easily digested than a strictly vegetable diet, one is more likely to overload the stomach, and this distention cannot fail to embarrass the heart.

Regular daily action of the bowels is desirable, and to procure this result gentle laxatives (hunyadi, rubinat, cascara, etc.) may be demanded.

When the dyspnœa attends asystolism and broken compensation, the flagging heart may be for a time sustained by the so-called cardiac tonics,—digitalis, caffeine, strophanthus, etc.

To calm nervous perturbation, a judicious selection may be made from various analgesics, antispasmodics, and narcotics of the materia medica. Hayden combines the calmative with the tonic treatment ; his favorite prescription is ten minims

* " In my opinion this aortic pseudo-asthma is due to arterial hypertension ; now, this is augmented by the horizontal position and under the influence of sleep, as it is also increased by the effort of walking and of movement" (Huchard, " Maladies du Cœur et des Vaisseaux," 1889, p. 132).

of the spirits of chloroform with fifteen minims each of the tincture of digitalis and the tincture of perchloride of iron in an ounce of water every three hours.

Among the "respiratory medicaments," Professor Germain Sée speaks highly of "erythrophleum, in 20-drop doses of the alcoholic tincture; in simple or cardiac asthma the respiratory movements become slower and more ample under the influence of this remedy."* The same writer recommends iodide of ethyl and iodide of potassium as medicaments which directly favor the respiratory movements by a specific effect on the medulla oblongata. The iodide of ethyl is given in the dose of 6 to 8 drops five or six times a day; the iodide of potassium in 10 to 15-grain doses three times a day. But, after all, in grave cases, and sooner or later in all, resort must be had to hypodermic morphine, in doses sufficient to quiet disturbed nervous action, allay spasm, and facilitate respiration.

Since the attention of the profession has been particularily called to arterial hypertension as a principal factor in the dyspnœa of aortic disease and of arterio-sclerosis, it has been maintained that this dyspnœa is of toxic origin, and weighty considerations have been advanced by Hurchard and others to establish this view of the case. Huchard points to the beneficial results attending the use of remedies that lower arterial tension —bleeding, purgatives, nitrite of amyl, and nitroglycerin,—and especially to the utility of an exclusive milk diet in combating these paroxysms of aortic dyspnœa, causing them often to disappear in the space of a few days. Now, this medication, he says, acts in two ways and fulfils two indications,—first, by the abundant diuresis which it provokes, the milk diminishes the arterial tension, and promptly eliminates the toxic principles contained in blood; secondly, it acts because it is bland, harmless, and does not launch into the current of circulation, as do other aliments, and meat in particular, materials which, being incompletely eliminated, become rapidly toxic to the economy.—*Ed. Therap. Gaz.*

* "Maladies du Cœur," 1883, p. 511.

THE CHEMISTRY OF GOUT.

At the last meeting of the Medical and Chirurgical Society an important contribution to our knowledge of the chemical changes occurring in the tissues of gouty persons was brought before the Society by Sir William Roberts, in the form of a very elaborate paper on the subject. In bringing forward the subject Sir William Roberts referred to a recent paper of his, in which he had shown that in the physiological state uric acid existed in the blood and urine exclusively as quadrurates, and that when it appeared in any other form this was due to abnormal changes in the quadrurates. In that paper he had traced the changes which the quadrurate underwent in urine—changes leading up to the separation of free uric acid in gravel. In the present paper he proceeded to consider the changes which the quadrurates undergo in the blood—changes leading up to the deposition of free uric acid in gout. These latter changes were intimately connected with the property possessed by the quadrurates of taking up in alkaline solutions an additional atom of base—thereby becoming converted into biurates. A knowledge of this reaction enabled us to present a coherent view of the succession of events which culminated in a gouty paroxysm. Normally, the uric acid, which circulated in the blood as quadrurate, was at once removed unchanged by the kidneys. But in the gouty state—either from defective kidney action or from some other cause—the quadrurate lingered unduly in the blood; circulating then in a medium rich in sodium carbonate, it was gradually transformed into sodium biurate, which was almost insoluble in blood-serum and probably, for this reason, was difficult of removal by the kidneys. Under these new conditions sodium biurate accumulated more and more in the blood and, when the accumulation reached a certain point, was precipitated in the crystalline form in the joints and elsewhere, thereby determining the occurrence of a fit of the gout. Sir William Roberts said he based this view upon a study of the reactions of blood-serum and synovia with uric acid and the urates In the case of blood-serum these depended essentially on the saline ingredients; the sodium salts exceeded all the other salts put together in the ratio of 7 to 1, and a solution of 0.5 per cent. of sodium chloride and 0.2 per cent. of sodium carbonate was a fairly exact imitation of blood-serum so far as concerned its saline ingredients. Experimentally, it was found that such a solution behaved with uric acid and the urates in the same manner as blood-serum itself, and in the same manner as a solution composed of all the salines of the serum in their due proportion. The behavior of uric acid and the urates with this "standard solution" was then studied in detail and the results checked, by comparing them with those obtained with blood-serum under similar circumstances. The author found that sodium biurate dissolved in water at 100° F. in the proportion of 1 in 1,100, but that it was almost insoluble in the standard solution and in blood-serum, and no addition of potassium, lithium, or magnesium salts—whether alkaline or neutral—made the slightest difference. The solvent power of the standard solution was found to depend exclusively on the sum of sodium salts contained in it, and the degree of alkalescence had not the least influence; the nearer the standard solution ap-

proached to pure water, the higher became its power of dissolving sodium biurate, and *vice versa*. The solubility of gouty deposits was tested by suspending gouty articulations, encrusted with uratic deposits, in a large volume of blood-serum; the deposits remained unchanged even after immersion for many months. Uric acid, itself dissolved freely (as a quadrurate) in the standard solution—and also both in blood-serum and synovia—but after an interval of a few hours or a few days it was again precipitated, often somewhat suddenly, in the form of crystalline needles of sodium biurate exactly resembling those found in gouty deposits. The author held that this reaction was analogous to the phenomena of the gouty paroxysm. In gout. he considered that the blood became increasingly charged with uric acid, until, after a certain period of incubation, sudden precipitation of sodium biurate occurred and the "fit" of gout took place; then followed a process of recovery with restoration of the blood to a purer state. In the experimental process a similar succession of events was observed: solution of uric acid in the medium as quadrurate; gradual conversion of quadrurate into biurate (stage of maturation); deposit of the biurate in the crystalline form (stage of precipitation); restoration of the medium to comparitive purity.

With regard to the conditions which hastened or retarded the processes which culminated in the precipitation of sodium biurate, the following results were arrived at: 1. Precipitation occurred earlier in synovia than in blood-serum. 2. Increased alkalescence of the media favored the stage of solution, but did not retard the stages of maturation and precipitation. 3 The addition of sodium salts hastened maturation and precipitation. 4. The addition of potassium, lithium, or magnesium salts had no effect either way—except potassium chloride, which retarded maturation. 5. Maturation was hastened and precipitation occurred earlier at 100° F. than at the temperature of the room. 6. The proportion of uric acid in solution was the circumstance which exercised the most decisive influence on the speed of maturation, and on the time of advent and copiousness of precipitation. If the proportion of uric acid in solution were 1 in 2,500 or over, there was observed in the middle period of maturation, on the second or third day, a copious critical precipitation; but if the proportion were 1 in 4,000 or under, the precipitation was throughout scanty and gradual, and postponed to the twelfth or fourteenth day. Dr. George Harley remarked that when Sir Alfred Garrod proved that gout was due to the existence of uric acid in the system, a distinct advance in our knowledge was made. A further advance was made when it was shown that an acute attack of gout was due to the deposition of uric acid in the articular cartilages. Later on, it was shown that the deposits were not due to inflammation of the joints, but that the deposits caused the inflammation around the joints which was known as gout. Sir William Roberts' present paper was a contribution to the chemistry of gout, and Dr. Harley urged that, through chemistry, a new pathology would be founded in which all morbid changes would be proved to be due to chemical action. Dr. Haig observed that Sir William Roberts's paper afforded a chemical explanation which he had long wanted. He had found that alkalies increased the excretion of uric acid, and Sir William Roberts had shown that increased alkalescence favored the state of solution of uric acid. Similarly, acids lessened the amount of uric acid excreted. Sir William Roberts then replied, and remarked that he had confined himself to certain chemical results, and had drawn no conclusion as to the profounder theories of gout. There was something in gout beyond the chemistry of the urates; it was, in essence, a mode of nutrition associated with an error, which was uric acid. There was a colloidal form of uric acid, as well as the crystalline form, and the action of the two forms also differed. He believed that if an attack were imminent, a patient ought not to take mineral waters containing soda and lime, except very sparingly at first. Dr. Herman Weber had, for many years, warned his patients on this point. Sir William Roberts said he thought it possible that most of the good done at mineral springs was due to the water taken, and not to the salts it contained.—*Correspondence, Med. Rec.*

THE THERAPEUTIC VALUE OF ELECTRICITY.

The school of electro-therapeutics, which may be said to have been founded by Duchenne, has not made satisfactory progress during the last quarter of a century. The studies of this observer upon electricity in the clinic, founded upon some accurate anatomical and physiological knowledge of the muscular system, gave the subject an impetus which still survives to keep this agent before the profession, and to insure its recognition in spite of the abuses to which charlatanry or ignorant credulity have too often subjected it. Duchenne's work was chiefly upon an anatomical basis; his great aim was clinical results. The legacy which he left was a great mass of empirical observations on the action of electric currents upon the muscles and nerve-tissues in health and disease. His studies were almost entirely confined to the neuro-muscular apparatus. His method was one of simple clinical observation, without experimentation or very exact pathological findings. It is not too much to say that his followers have adhered to his method, and have not made much advance beyond him in the direction of what could be called accurate scientific work.

The defects of this method are numerous. The class of diseases to which electricity has been mostly applied by the followers of Duchenne, includes the degenerative diseases of the spinal cord, nerve-trunks, and peripheral nerve-endings. The patients especially who are subjected to the current are those who suffer from acute or chronic anterior poliomyelitis, neuritis of traumatic or toxic origin, and sometimes the victims of ataxia and other systemic lesions of the cord. The morbid anatomy of these diseases is now fairly well understood. The clinical history and termination of many of them can be predicted with accuracy. It is, for instance, well within the bounds of probability that a facial paralysis due to neuritis will recover entirely, and that an infantile paralysis due to acute inflammation of the anterior horns will leave a residuum of palsy and wasting which may be permanent. The lesion in all these diseases is destructive. The repair is by a progressive building up of new tissue—a strictly nutritive process, which requires time and favorable conditions, and cannot be done or assisted artificially, except in the most indirect way, as by the supply of food, hygiene, etc. Here is the gist of the whole matter. The question which forces itself upon the mind is whether galvanism or faradism can influence this process at all. Clinicians have answered this question almost unanimously in the affirmative, but there are dissenting voices of authority. It is hard to conceive how an electric current, applied hap-hazard on the skin of an arm or leg, can influence cell-growth in a nerve-trunk, or particularly in the spinal cord. Empirical methods and results are not to be altogether ignored, but it is, nevertheless, unfortunate that any therapeutic agent has to rely entirely upon an empirical record. This we think is the position of electricity to-day as applied to diseases of the motor apparatus, and justifies us in saying that the science has not advanced beyond where Duchenne left it.

The use of electricity in diagnosis by the reactions of degeneration has been thus far its most exact scientific result; and while we believe this test is not as widely applicable as some have claimed, it is, nevertheless, now reduced to accepted formulæ which seem trustworthy, and promise to be permanent.

In spite of what we have said, we think electricity, as a therapeutic agent, has a bright future in some departments of practice. We refer now to its dissolvent action by electrolysis. We wish to indicate here briefly a few cardinal principles upon which some of its advocates do not sufficiently rely, and of which some of its determined foes appear to be completely ignorant.

The power of a galvanic current to break up into its constituents a fluid medium, such as water, through which it may be passed, is one of the elementary facts of electro-physics. This power is exerted equally upon more complex fluids, such as solutions of chemical substances, and also upon organic fluids, such as blood, serum, milk, etc. Finally, it is exerted upon organized tissue. Thus water is resolved into hydrogen and oxygen, as may be readily observed upon passing a mild current through a tvmbler of this fluid. In compound fluids or salts the acids seek the positive, while the alkaline bases go to the negative pole. The subsequent chemical actions of these acids and alkalies are just the same as would be the case if they were introduced from without, and constitute the secondary action of electrolysis. Now, the important point which therapeutists have too much neglected is this, that these changes are in exact quantitative relation to the strength and duration of the current,—that is to say, with so much current strength continued a certain time (or, technically, with so many *coulombs* of electricity), just so much hydrogen, oxygen, or what ever the simple atom or compound radicle may be, will be liberated. In such a simple fluid as water the figures of this problem are exactly known, but in such a complex series of organized tissues and fluids as exist in the human body (while doubtless, the changes are just as constant and according to law) the figures are not known. It thus appears very evident that the power of electricity to break down organized tissue is not only indisputable, but that it may even yet be reduced to an exact dosage, and that it thus fulfils the first requirement of exact science,—conformity to law.

We are perfectly aware that electrolysis in surgery becomes a practical question,—*i. e.*, whether it can compete with the knife? Into this rather vexed question we do not propose here to enter. Several most important issues are involved. Can it be always controlled with perfect safety to surrounding parts? Is it expeditious, clean, and attended with little pain? Can it be rendered antiseptic, or is it already so? Several indications are imperative. The dose must be adequate and must be applied direct, and not allowed to diffuse widely through the skin and mucous membrane; hence puncture is probably always preferable. Finally, the dosage must be studied with care to supply data for reference. That certain fibroid tumors, bronchoceles, nævoid growths in vascular regions have been successfully treated in this strictly scientific way is without doubt.—*Ed. Therp. Gaz.*

Recent Remedies Employed in Pertussis.—Dr. Stepp has published a second article on the treatment of whooping-cough with bromoform. In one hundred cases treated there was not a single failure. He gives the bromoform pure in one-drop doses in a teaspoonful of water. On account of its

high specific gravity the bromoform sinks to the bottom of the spoon, and forms an isolated drop. The teaspoon should then be carried well back into the mouth, and its contents rapidly swallowed. The dose, given three or four times daily, varies as follows: For children of three to four weeks, one drop; in older, nursing children, three drops, according to the intensity of the attack; in children of two to four years of age, four or five drops; up to seven years of age, six to seven drops. Dr. Stepp claims diminution of vomiting, shortening of attacks, and increased appetite, with a perfect cure in from two to three weeks. But a small quantity of bromoform should be ordered at a time, as it is volatile. Protect it from the light to prevent decomposition. Red bromoform should be rejected, as it is decomposed and contains free bromine, and is consequently unsuited for administration. Dr. Rothe warmly recommends, for children of from one to two years of age, iodophenol in whooping-cough, administered after the following method: Phenic acid, 1 gramme; alcohol, 1 gramme; tincture of iodine, 10 drops; tincture of belladonna, 2 grammes; peppermint water, 50 grammes; syrup of white poppies, 10 grammes. Mix. One teaspoonful for a dose. Older children in proportion. Hydrate of turpentine is also favorably mentioned. It forms large, colorless, odorless, rhombic crystals with a weak aromatic taste, and easily soluble in hot water. Lepine first recommended it in 1885 as having a similar action to oil of turpentine, without the unpleasant effects. In small doses (three to nine grains) it acted on the bronchial mucous membrane, and was found useful in chronic catarrh. In large doses, it diminished secretion, and was given with excellent results in bronchorrhœa. When the kidneys were healthy, no evil result followed; but when those organs were diseased, large doses produced hæmaturia and albuminuria. Later, Germain See, who gave large doses to animals without harm, and to man as much as thirty grains daily in alcoholic solution as pill, praised the good effects of the hydrate in the initial catarrh of phthisis, where it lessened secretion; and he recommended it as a hæmostatic in bleeding from the lungs. In this opinion he has been confirmed by Lazarus. Recently Manasse has made careful trials of it in forty-one cases of pertussis. To children under a year, daily doses of over twenty grains were given without ill effects upon the renal or digestive organs. In none of the urines of older children examined, after amounts of thirty-five to forty-five grains daily, was albumin or blood found. The ages of patients ranged from nine months to twelve years. The general result was, that after four to five days' use of turpentine hydrate (twenty to forty-five grains, according to the age of the child), there was lessening of the attacks—at all events they became much mitigated. In all the cases there was bronchial catarrh, which improved more rapidly than usual and soon entirely disappeared. —*Med Rec.*

The Silver Lines of Pregnancy.—Langdon thus summarizes a short paper in the *Cincinnati Lancet-Clinic*:

1. The abdominal lesions known as "*striæ albicantes*," or "silver lines" of pregnancy (and other abdominal distentions), are a true deformity, due to over-stretching of an abnormally nourished skin.

2. Their prevention may be accomplished by daily inunctions of olive oil, followed by gentle hand friction for about ten minutes; the treatment should begin at, or before the fourth month, bearing in mind that prevention, not cure, is the object sought.

3. Corsets, constrictions and suspension of clothing from waist bands are to be avoided entirely—at least, after the third month of pregnancy.

To paraphrase the old adage—the lines are "silver," their absence golden. Another desirable object attained by the treatment is relief from the aches and shooting pains often complained of, which are largely due to the irregular stretching and compression of the nerves of the abdominal parietes.—*Times and Reg.*

How to Use Sulphonal.—Dr. J. Madison Taylor, in the *University Med. Magazine*, protests against the growing distrust of sulphonal, believing that when judiciously used it shows rare and admirable qualities. But he thinks it has been improperly administered, and gives his opinions based upon an extensive use. He gives from five to seven grains, rarely more than ten grains, beginning in the afternoon, and repeating about every three hours. Three or four doses will usually be followed by excellent results in securing a normal night's sleep. It seems best administered in a little soup or milk. In those who are wakeful towards morning, it is best to give the drug towards bedtime to secure its tardy effect. Thus used sulphonal gives excellent results, and seems free from danger or unpleasant effects.—*Indiana Med. Journal.*

The Cause and Treatment of Chlorosis.—According to the Paris correspondent of the *British Medical Journal*, M. Duclos believes with Sir Andrew Clark, that chlorosis is a fæcal auto-intoxication, which should be treated by purging, prolonged until the intestine is completely freed from all the hardened and decomposed fæcal matters. He recommends a vegetable rather than meat diet. When constipation is not very marked the affection results from the great activity of putrid decomposition, and should be treated with

carbonate of soda combined with carbonate of lime, magnesia, and charcoal. Iron is beneficial because it forms an iron sulphide with the hydrosulphuric acid in the intestine. Hyposulphite of sodium has been of use in checking fæcal fermentation; naphthol might serve the same purpose.—*Med. News.*

INEBRIETY AND MARRIAGE.—Dr. T. D. Crothers, in an editorial in the *Quarterly Journal of Inebriety*, says: Public sentiment is shocked at the marriage of lunatics, and yet every day the lunatic inebriate is permitted to marry, and persons are ready to join themselves in such a contract for the purpose of curing them. In a recent murder case it appeared from the evidence that the murderer's father was married when intoxicated, and died a few years after by suicide. The murderer was the first child, and was a low, paroxysmal drunkard, who had spent years in prison for crimes of drunken violence, and finally killed a passing stranger. In another case the courts refused to grant a woman a divorce who had recently married and found her husband an inebriate; a few months later this husband killed her in a drunken frenzy. In a certain family of entailed wealth there are living to-day, in the third generation, ten direct descendants who are feeble-minded, idiotic, and insane; all clearly traceable to the marriage of an inebriate ancestor. The failure of the law to prevent and regulate such marriages, and the delusion that inebriety is a *vice* that is under the control of the victim, is one of the great obstacles toward social and legal reform. The efforts to raise the poor and degenerate inebriate and his family are practically of no value as long as marriage with inebriates is permitted. Recently the legislature of the State of Victoria in Australia has passed a law which gives a wife the right of divorce if the husband is found to be an habitual drunkard. If after marriage she discovers that he is an inebriate she can also get a divorce. The husband can do the same with a wife if she is proven to be an inebriate. This is a clear anticipation of the higher sentiment which demands relief from the barbarous law which would hold marriage with an inebriate as fixed and permanent. —*Am. Pract. and News.*

TREATMENT OF TUBERCULOSIS WITH BORACIC ACID.—For the past five years, Dr. Gaucher has been studying the action of boracic acid on pulmonary tuberculosis. He has recently made public the results which so far have accrued from his researches. He first of all determined by means of experiments on animals the toxic limits of the acid when administered internally, and he found that this stood at the ratio of about a gramme to a kilogramme of the animal's weight. As to its subsequent elimination from the system, he found that this took place very readily and even rapidly by way of the renal secretion; there was therefore little fear of any accumulation or tardy cumulative action. But, what was an equally important and desirable result, he found that the boracic acid was also eliminated appreciably through the expectoration; the sputum of tubercular patients whom he had subjected to this treatment was found to be very freely charged with the acid. Some of his experiments are not only interesting, but certainly encouraging in their ascertained results. For example, he took two or three rabbits and injected into their lungs through a needle syringe a few drops of a solution of pure tubercular culture. In this way he set up a local tuberculosis which became caseous but not generalized. Some of the animals soon succumbed to pulmonary tuberculosis, and the surviving ones were shortly after destroyed. Well-marked phthisis was found in all post mortem. He next repeated his inoculations on healthy rabbits in precisely the same manner, but he now fed the animals on bran mixed with boracic acid. After a time these also were sacrificed, but, contrary to what he found in his initial experiments, their lungs were quite free from any tubercular lesion, neither was any found elsewhere. It is submitted that, although these experiments on rabbits may not be altogether conclusive as to a like action of boracic acid on human tubercular subjects, they are at least—in the face of the enormous mortality from phthisis and hopelessness of therapeutic methods in general in this disease—worthy of serious attention and more extended trial. As to clinical results, so far as it has been tried, the boracic acid treatment has been found to bring about a notable diminution in the expectoration, which became more fluid and less purulent. Considerable time is, of course, necessary before speaking of remote or final results, but in the cases in which the treatment has been tried, and which have been under observation for a considerable period, it may be said that in general they improved in every way, while the tubercular trouble in the lung appeared to be at a standstill. The dose administered in these cases was one gramme in divided doses in the twenty-four hours. This, on the weight theory, must be considered insufficient. Taking the average weight of a patient to be sixty kilogrammes, and putting the limit of dose at twenty centigrammes for every three kilos, four grammes of the acid should be given per day, the dose being, of course, graduated up to this amount. Boracic acid will be found as a rule to agree well with the stomach, and is easily taken; it is not caustic, has no diagreeable taste, and in some cases was found even to check the diarrhœa when this existed.—Paris Correspondent, in *Lancet.*

OINTMENT FOR SYPHILITIC ERUPTIONS.—The *Medical Free Press* says that there was in use in

the Lock Hospital an ointment for erythematous, papular and scanty syphilitic eruptions, which on account of its rapidly curative effects used to be called by the patients the "magic cream." The composition was as follows: One part of ammoniate of mercury and three parts of oxide of zinc, mixed and rubbed into a fine powder, with sufficient glycerine and lard to make a stiff cream. A few drops of olive oil facilitates the mixture of all these. It is really astonishing how a few applications of this will make a very perceptible rash disappear in a few days. A very ready method of preparing the above is by mixing one part of the ammoniated mercury ointment with three parts of zinc ointment, each being fresh, and adding a little glycerine.—*N. W. Lancet.*

Perchloride of Iron for Leucorrhœa.—Of all remedies for simple leucorrhœa, the old tincture of perchloride of iron is the best, combined with hyoscyamus, opium, hop, or Indian hemp, when the mucous membrane is in a state of irritation. Tepid or cold water injections, cold hip-baths, etc., are useful local applications, with rest; and avoidance of occupations involving prolonged standing or pedal exercise.

Sometimes tannin, zinc, or alum are valuable additions to the injections. When the discharge emanates from the glands of the os uteri, local applications of belladonna and bicarbonate of potash are serviceable, two ounces of tincture and a teaspoonful of the alkali to about a pint of water.—*Archives fur Gyn.*

Injections of Blood for Chlorosis.—Dr. Antiq, of Lyons, in a recent thesis, recommends injections of defibrinated beef-blood as a remedy for chlorosis. The fluid should be taken from animals known to be healthy. After being whipped once, it is put up in bottles holding half a litre each, a quantity sufficient for four injections, 125 grammes being administered night and morning. The bottles must be kept in a cool place, and heated on a bain-marie before using. The patient should be directed to retain the injections as long as possible. Sometimes they produce slight colic, in which case they must be preceded by a purgative enema, or if this is ineffectual, three or four drops of laudanum may be added to the blood.—*New York Med. Times.*

Treatment of Tabes Dorsalis.—Professor Leyden, whose monograph on *Tabes* is well known, has, after the lapse of twenty-five years, given us a further statement on the same subject. On the question of treatment we find that Dr. Leyden lays great stress on the use of warm baths (temperature 95°-96° F.), the duration of which should be 5,10,20 minutes. Three kinds of baths are employed—1, the simple warm bath; 2, brine baths containing CO_2; 3, sweating baths and vapour baths. The first and third kinds are suitable in the early stages of tabes, the second in the more advanced stage. Dr. Leyden considers that nerve stretching has once for all received its condemnation. He has not the least faith in suspension, and is in hopes it may soon disappear from the therapeutic stage. Of massage he speaks with indifference; of the electric treatment he says it must not be overrated.—*Br. Med. Jour.*

Turpentine in Typhoid Fever.—Dr. H. C. Wood advises a return of the turpentine treatment of typhoid fever as practised by Dr. G. B. Wood. He begins its use about the twelfth to the fifteenth day, thinks it lessens the tendency to hæmorrhage, and ameliorates other symptoms due to the local lesions.

His formula is:

℞.—Oil of cloves - - gtt. vj.
Oil of turpentine - f ℥ jss.
Glycerine, Mucil. of acacia āā f ℥ ss
Syrup, Water - - āā q. s. ad f ℥ iij.—M

Sig.—Dessertspoonful every three hours during the day.—*Med. News.*

Diuretic Effects of Grapes.—Dr. Pecholier, of Montpellier, has published a note on the diuretic effects of grapes, which would appear to confirm the diuretic action of glucose recently brought to notice. In two cases, one a patient with cardiac disease, and the other the subject of hepatic cirrhosis with ascites, a "grape cure" was undertaken with the best results. In the former patient, notably, five pounds of grapes were daily ingested, in three parts, and the diuresis produced was much more considerable than with milk, digitalis, or iodide of potassium. This effect can only be attributed to the sugar of the juice of the grape, the other parts of the fruit having been rejected.—*Lancet.*

Virgin Modesty.—A Sister of Charity had a tape worm. "When we have what we cannot love," says the proverb, "we must love what we have." But the nun and the proverb differed in opinion. The expulsion of the anchorite was decided on. A physician was called in and prescribed kousso, that Fourth of July for tape worms, but alas! the kousso failed. "Ah, Sister!" said the physician to the *religieuse*, "when kousso fails we must use the *male fern* on you." The nun blushed scarlet, and timidly made answer: "The *male fern*. Heavens! In that case, doctor, I must have a special dispensation from our Bishop!"—*Lancet-Clinic.*

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HYDRONAPHTHOL IN THE TREATMENT OF TYPHOID AND OF DIARRHŒAS.

Mr. K. Mitchell Clarke (in the *Practitioner*), gives us a most interesting and instructive paper on the above subject. He starts out with the idea that antisepsis of the alimentary canal should shorten both the duration of the disease, and lessen the severity of the symptoms, in all intestinal catarrhs. It is now generally believed, that the fever accompanying many of the diseases of the intestinal tract, is due to the absorption into the blood of the toxic products of fermentation—the ptomaines—or life products of bacteria—specific or otherwise, which have a habitat in the intestinal contents. At the same time, they by this local action irritate the intestine and cause the continuance of the malady—originated perhaps by some simple cause, such as undigested ingesta, etc.

By producing intestinal antisepsis these fermentations are checked and the evil results arising from them are obviated to a degree commensurate with the completeness or otherwise of the antisepsis. Theoretically a perfect antiseptic would be one which would not influence harmfully the digestive process, could not be absorbed into the blood, or if so, should be innocuous to the general economy, and at the same time exert its antiseptic influence upon every part of the intestinal tract. While a perfect drug can hardly be looked for, inasmuch as any remedy which will check fermentations will also to a greater or lesser extent interfere with the digestive process, that also being a kind of fermentative change, yet Mr. Clarke thinks he has found in hydronaphthol a substance which comes nearer to the idea of a perfect antiseptic than any yet experimented with. It is absolutely harmless, even if absorbed in large quantities. Its taste is somewhat pungent and burning, and it has a faint odor of carbolic acid. A number of experiments were undertaken to show to what extent it effects digestion, the result of which go to prove that hydronaphthol has a distinctly retarding influence upon the digestion of egg albumen by peptic fluids, that it has a very slight effect on the digestion of milk by these same agents, and that it has no effect at all on the digestion of either milk or albumen by the pancreatic ferments, nor on the conversion of starch into sugar. Now, as in most cases of intestinal troubles milk is the diet, hydronaphthol may be given without danger of interfering with stomach digestion to anything more than a very slight extent, and if any fear were entertained that even the slight check might prove prejudicial to the patient's safety, the drug might be administered in pill form, coated with keratin, so that it would not be active till it had passed the pyloric orifice, when as Mr. Clarke has shown, its influence over digestion ceases. Mr. Clarke usually administered it either in pills coated with gelatin, or suspended in milk, in doses of two or three grains every two hours. For children under one year the dose is half a grain, for older children, half to one grain every hour or two as required. Five cases of enteric fever were treated by this method, and all did well, although two of them were severe and prolonged. The effect of the drug upon the diarrhœa was very marked, that distressing symptom being at once controlled by it, and the offensive odor of the stools being lost. The dose in typhoid should be a little larger than those mentioned above—say three or four grains every two hours until the diarrhœa is checked, and then every three hours during the whole course of the fever. The author of the paper believes it is a valuable remedy in the diarrhœa of children with green colored stools, several cases which he treated with it, yielding readily, only one case proving obstinate. In two cases of dysenteric diarrhœa it acted well, as also in a case of the diarrhœa of tuberculosis.

THE BLOOD.

The importance of a very complete knowledge of the blood is evident to all who are engaged in the practice of medicine. True it is, that for the every day rank and file doctor, the knowledge that the blood consists of water, red and white corpuscles, together with albumins, fibrine, salts, extractives, etc., has seemed sufficient. But the physiologist and pathologist are not satisfied with what is already common property in regard to the constituents of the blood, and they are, with very laudable ambition, endeavoring to discover new things in connection with this all-important fluid, and to identify their names with such discoveries. Students have been not a little puzzled by the numerous terms found in text-books, to express the ideas conceived by those experiments, their discoveries having, in many cases, proved mares' nests, and their terms ephemeral. While much that was illusive has been written, the progress of material knowledge in this department, as in all others connected with physiology, has been steady, and, thanks to the patient care of these laboratory workers, our conception of many physiological and pathological processes is much clearer than it was even one decade ago, all the blunders, ephemeral terms, and mares' nests notwithstanding.

The latest discovery is that of a new blood cell, by Dr. Alexander Edington, of Edinburgh, a surgeon and bacteriologist of considerable repute, who has devoted much time to the study of the morphology of the blood. This new cell, Dr. Edington calls an "albocyte." It is a spherical, colorless cell, of about one-third the diameter of the ordinary red blood corpuscle, of which it is an early form.

The whole of Dr. Edington's views regarding the blood cells may be summed up as follows:

Starting with white blood corpuscles, he finds that in their earlier life, they contain one, or at most two nuclei, which number, after a certain period of development, is increased to four. The discharge of these nuclei from the cell results in the formation of "free," or "daughter" nuclei, of which some go in to the development of fresh white blood corpuscles, while others become multinucleated cells, also allied to white blood corpuscles, but having distinct functions to perform. To this cell the discoverer gives the name of matricyte, and it, after increasing in size, discharges its numerous nuclei, and then forms, what he calls, the new cell—the "albocyte." This gradually enlarges, takes up hæmoglobin, and eventually is transformed into the perfect red blood corpuscle. The arrangement, then, according to Dr. Edington, is: (*a*) The white blood corpuscle; (*b*) The daughter nuclei; (*c*) The matricyte; (*d*) The albocyte; (*e*) The red blood cell; (*f*) The granular bodies called hæmatoblasts.

These latter bodies were named by Hayem, and consist, according to him, of granular matter originating in the white cell. They are concerned, together with the white cell, in the formation of fibrin.

THE CANADIAN MEDICAL ASSOCIATION.

It is to be regretted that the attendance at the recent meeting of the Dominion Medical Association was not larger. The physician who allows the fear of losing the receipts from his practice for the few days requiring his attendance at such meetings, to influence him in not attending, acts upon a mistaken idea of economy. It is in, and by such meetings that the general good of the medical profession is advanced and every physician should consider it his duty to attend. No organization has done more than the Dominion Medical Association to maintain the unity of feeling and purpose, which exist among the members of the profession to-day, and apart from its social and scientific benefits, it has conferred benefits upon all which should keep alive its claims. When we state that of the three hundred and eighty medical men in the City of Toronto, not more than twenty-five attended this meeting, and also that at a meeting held over twenty years ago the attendance was much larger and more representative, we may be excused if we question the progress of the medical profession as being upon as high a plane as some would lead us to imagine.

Puerperal Eclampsia.—Mr. Alban says (*The Med Jour.*) that he has seen six cases, four whilst acting as assistant and two in his own practice.

All the mothers recovered, and two or three children were saved. The first case was treated by administering chloroform, bringing on labour, delivery by forceps, placing 5 grains of calomel and 2 drops of croton oil on the tongue ; which brought away an enormous scybalous mass, but no arrest of the fit until nearly a pint of blood was taken from the arm. Chloral was afterwards given. In a few hours the fits returned, but on addition of morphine to the chloral it acted like a charm, and they were completely controlled by the latter drug. In this case convalscence was very long. The other five cases, which were not bled, recovered very much more quickly.

The treatment consisted in emptying the uterus early, some with and some without chloroform, dilating the os with Barnes' bag when necessary, and applying forceps or version when more convenient, clearing the bowels, and quieting the fits by giving morphine combined with chloral to give quicker effect. I look upon morphine almost as a specific in these cases, after the uterus and the bowels have been emptied. Ordinary doses of brombide of potassium were disappointing in my hands. I consider venesection useful if there is no other remedy at hand.

A $200,000 Libel Suit.—Suit has been entered by William Radam, manufacturer of Radam's Microbe Killer, against the *Druggists Circular*, of New York, for $200,000 damages, the largest amount so far as heard from that was ever asked for in a libel suit of this kind.

The pleadings show that the action is brought to recover damages claimed to have been done the business of the plaintiff by an article published in the *Druggists Circular* for September, 1889. This article gave the result of an analysis of the Microbe Killer made by Dr. R. G. Eccles, a prominent chemist of Brooklyn, who stated that an identical preparation could be made by the following formula.

Oil of vitriol (impure)....4 drams.
Muriatic acid (impure)...1 dram.
Red wine, about .....1 ounce.
Well or spring water.....1 gallon.

This mixture, it was alleged, could be made at a cost of less than five cents per gallon for which Radam charged three dollars.

It was further alleged that while when properly used sulphuric acid, the principal constituent of the Microbe Killer, was a valuable medicine, it was, when taken without due caution or advice, a slow but certain cumulative poison ; and the theories advanced by Radam, as to the causes of diseases and the proper method of treatment, were alleged to be totally erroneous. Col. Robert G. Ingersoll. the famous lecturer, is the counsel for the plaintiff.

The *Druggists Circular* which is published at 73 William street, New York, expresses a desire to hear of any case in which unfavorable results have followed the adminstration of the Microbe Killer or of any other fact that would be interesting under the circumstances. They claim to have published this analysis, without malice and with the sole intention of protecting the public from the loss of their health and money by the use of a dangerous nostrum.

Rotterham House.—"Nothing succeeds like success," is an old maxim, and an instance of it is found in the extraordinary success that has attended the Private Hospital opened by Dr. Holford Walker, a little over a year ago, on Isabella street, for the treatment of surgical and nervous diseases of women. The Doctor having procured a handsome pair of semi-detached houses, the hospital was opened with a staff of four nurses, two for the surgical cases, and two for the nervous cases requiring massage. The demand for rooms became so great that it was necessary to procure more accommodation, and a handsome house adjoining was purchased this spring, and the three joined by a covered bridge, the whole forming one of the most complete private hospitals on the continent. The staff of nurses has been increased to eight. As the Doctor does no outside work except in consultation, he is enabled to devote his attention to the minor details so essential to the comfort and welfare of his patients.

An engraving of the establishment will be found in this month's issue.

Therapeutic Uses of Peroxide of Hydrogen. —Dr. Mikhail P. Manassein, of St. Petersburg, (*Novosti Serapii*) draws attention to the following points in connection with the subject :—

1st. Peroxide of hydrogen is an excellent antiseptic and disinfectant agent which deserves the most extensive use.

2nd. It proves especially valuable in cases of herpes progenitalis, soft chancres and gonorrhœa. The latter may be cured by injections of peroxide in eight to twenty-one days; soft chancres in from five to fourteen, by using the drug in the form of lotions.

3rd. It is entirely free from any odor, does not soil the linen, or give rise to any local pain or irritation or any unpleasant general effects.

4th. It affords a most reliable means for preventing any venereal infection by using it as an injection and wash for men after each suspicious coition, and women should use it both before and after each sexual intercourse.

5th. It is very stable when kept in some dark and cool place.

Compound chrysarobin ointment, says the *Brit. Jour. of Dermat.* used chiefly in psoriasis, is, according to Unna's formula, composed of chrysarobin 5 parts, salicylic acid 2 parts, ichthyol 5 parts, and vaseline 88 parts. Aristol ointment is recommended by Eichoff: aristol 3 to 10 parts, vaseline 30 parts. It is said to be not less efficacious than chrysarobin in psoriasis, and to have the advantage over the latter that it does not stain the skin or irritate.

Bourgard's paste, a powerful escharotic, useful in epithelial cancer, is composed of wheat flour 60, starch 60, arsenic 1, cinnabar 5, sal ammoniac 5, corrosive sublimate 0.50, solution of chloride of zinc 2.45. The first six ingredients are to be separately ground and pulverized, and then mixed together in a glass mortar. The zinc solution is then to be slowly added, while the contents of the mortar are kept rapidly moving by means of a pestle.

Resorcin for Rodent Ulcer, etc.—Dr. Chas. Szadek, in the *Satellite*, recommends resorcin for various forms of skin diseases, particularly condyloma and verrucæ, in the form of ointment and powder. He reports a case of cure of rodent ulcer by using an ointment of resorcin and vaseline (25 per cent.). Dr. Seblond uses it in treating simple chancre, by sprinkling the ulcer each day with the powder, and gently cleaning it the following morning, as long as the base of the sore is of a greyish color. It becomes of a rosy hue, and shows healthy granulations in five or six days. Then a five per cent. solution of resorcin is applied, and cicatrization speedily follows. It will cure a recent chancroid in a couple of weeks.

Treatment of Sycosis.—Rosenthal, of Berlin, claims that the following treatment is followed by the best results. The patient must be shaved daily, and an application of the following paste made:

℞.—Acidi tannici	. . . . .	10 pp.
Lac. sulphuris	. . . . .	20 "
Zinci oxidi alb.	. . . . .	
Amyli. āā	. . . . .	35 "
Vaselini flavæ	. . . . .	100 "

℥.—Et. ft. ung.

The healing is rapid, the method is convenient, the pain insignificant, and renders it epilation unnecessary.

Abortive Treatment of Herpes.—M. Seloir employs the following solutions (*Med. News*) in the abortive treatment of herpes:

℞.—Resorcine,	. .	ʒ ss.
Cocaine mur.,	. .	gr. viij—xxx.
Ac. Tannici.	. .	ʒ jss.
Alcohol (90%)	. .	ʒ iij.—M.

Or,

℞.—Cocaine Mur.,	. .	gr. xv.
Ext. cannabis indicæ,	. .	ʒ ijss.
Spt. menth. pep.	. .	ʒ ijss.
Alcohol (90%),	. .	ʒ iij.—M.

Secrecy in Lying-in Hospitals.—Last week we expressed the hope of seeing institutions established here for enabling women pregnant out of wedlock to be assured of decent support and secrecy until they were relieved of their embarrassment by the birth of a full-time child, and recover from the disabilities of the lying in period. This we said in the interest of the restriction of criminal abortion. In the course of an essay on the proper measures for remedying the depopulation of France, an abstract of which appears in a recent number of the *Union Médicale*, M. Lagneau advocates the establishment of such institutions, and alludes to their existence in Vienna. The officers and employees are sworn to secrecy, and there a woman may be delivered and leave her child behind her when she is ready to be discharged, without her dentity being made known.—*N. Y. Med. Jour.*

DROPSY OF CARDIAC ORIGIN.—The following has been (*Med. Press and Circ.*) found useful in the dropsy of cardiac origin :—

Digitalis leaves.	30 grs.
Water.	6 fl. ozs.

Infuse and add to it :

Citrate of caffeine. . . .	30 grs.
Tinct. strophanthus. . . .	10 drops.
Acetate of potash.	2 drachms.
Syrup of orange.	1 fl. oz.

Mix. Dose, one tablespoonful during twenty-four hours.

ECZEMA OF DENTITION.—The following is recommended (*Med. Mirror*) for eczema of dentition :

Treatment is to be directed to three indications.

I. To calm pruritis of the gums, frequent rubbing with the finger dipped in a solution of the following :—

℞—Cocaine mur.	gr. i.
Pot. brom.	gr. x
Glycerini.	
Aqua destil. āā.	fl. ʒ ss.—M.

II. For insomnia a teaspoonful of the following hourly :—

℞—Sodii. bromidi.	gr. xii.
Syr. aurantii flor.	fl. ʒ iij.—M.

III. For the local eczema the following :—

℞—Zinci oxidi.	gr. xx
Vaselini.	ʒ i.—M.

TREATMENT OF GALL STONES.—The usefulness of pilocarpine seems to be increasing. According to the *Bulletin Gen. de Therap.*, Lekarckie makes the assertion that pilocarpine is almost a specific in the treatment of gall stones. It relieves at once the pruritus of jaundice. The dose hypodermically is one-eighth of a grain twice a day. Thirty cases have been treated successfully.

PERSISTENT DANDRUFF.—Mr. Stephen, writing to the *Lancet*, says the following is very useful in persistent dandruff. ℞ Resorcini, ol. olivarum, ætheris sulph., āā ℥iii. ; spt. vini. rect., ʒviss. To be well shaken, and applied to the scalp by a bristle brush about twice as large as the ordinary mucilage brush, by insinuating it between the locks of hair. The head to be well washed with soap and warm water twice a week.

FOREIGN BODIES IN THE NOSE.—It is a common occurrence (says *Med. Classics*) for children to get beans, grains of corn, and other foreign substances up their nose. This simple remedy is worth remembering : Get the child to open its mouth, apply your mouth over it, and blow hard. The offending substance will be expelled from its nose.

KELOID.—In the treatment of small keloid growths, Dr. Browning (*London Med. Recorder*), has obtained satisfactory results from the application of perchloride of mercury in collodion (1 in 30). The tumor is thickly coated with this application, which is allowed to remain on until it peels off, usually five or six days. Another coating is then applied, and so on, until, by successive coatings, the growth is reduced to a level with the surrounding surface.

JAUNDICE.—Dr. Withkowski (the *Satellite*), administers pilocarpine hypodermically in $\frac{1}{8}$ grain doses once or twice daily, for jaundice. He considers it almost a specific for the disease, and if it continues after ten to fifteen days' treatment, a malignant growth may be suspected. He has succeeded in over thirty cases, and only failed in those cases which subsequently proved to be malignant.

INJECTION FOR HÆMORRHOIDS.—Dr. Shuford (*St. Louis Med. and Surg. Jour.*) stated at the last meeting of the Texas State Medical Association, that he obtained good results by injecting the following in hæmorrhoids :

R.—Glycerole of salicylic acid, .	ʒ iv.
Glycerole of boracic acid, .	ʒ iv.
Carbolic acid, ...	ʒ iij.—M.

Sig.—Inject five to ten minims into each tumor.

BILIOUS ATTACKS.—Outis writes as follows in the *Lancet* : In a case of migraine similar to that detailed by " A Ten Years' Subscriber, " the following prescription gave prompt relief, and might, I think, be tried with advantage :—℞.—Pot. brom. ʒ ii. ; antipyrin, ʒ iss. ; liq. bismuth. et am. cit., ℥ i.; tr. card. co., ℥ ss. ; aq. ad. ʒ viii. Two tablespoonfuls when the attack comes on, to be repeated every two hours till relief is obtained.

PERSONAL.—Dr. Laughlin McFarlaneof Toronto, when returning from England, met with a very

painful accident on leaving the steamer at New York, sustaining a compound fracture of the leg. The bone protruded through the skin, and a portion of it had to be removed. He is in an hospital at New York, and is progressing as favorably as can be expected.

Is Diabetes Mellitus Communicable?—Now that the bacillus is abroad, certain diseases hitherto considered as hereditary, or at least not communicable have come to be regarded as such. The latest addition to their number is diabetes mellitus. Dr. Richard Schmitz (*Berlin Klin. Woch.; Pract.*) has noticed that in some instances husband and wife become diabetic, without being able to trace, in the one becoming last affected, any hereditary predisposition, or ingestion of too much saccharine matter, or any other cause. In the course of some years, he found it 26 times in 2320 cases, and the circumstances were very similar in all. They were persons hitherto considered quite healthy, with few exceptions married people, and chiefly women; and they had become suddenly diabetic after having nursed a patient suffering from diabetes for some time, slept continuously in the same room, or otherwise had intimate relations with him. Hereditary predisposition did not exist in a single case, nor was the second patient a blood relation of the first. No apparent cause could be discovered: too much sugar had not been taken, and there was no history of arthritis. These cases formed more than 1 per cent. of the whole, and occured under similar circumstances, so that mere concidence may be excluded. In the absence of any obvious cause, the question may be asked whether a transmission of the diabetes did not take place in these cases—a possibility which is strengthened and favoured by the long and intimate connexion between the individuals. Schmitz gives the clinical history of seven of these cases, where persons intimately related—chiefly man and wife—were attacked by glycosuria during or shortly after the illness of their friends.

Precautions against Tuberculosis. — The State Board of Health of Pennsylvania has lately issued the following:

"The duster, and especially that potent distributor of germs, the feather-duster, should never be used in the room habitually occupied by a consumptive. The floor, woodwork, and furniture should be wiped with a damp cloth. The patient's clothing should be kept by itself, and thoroughly boiled when washed. It need hardly be said that the room should be ventilated as thoroughly as is consistent with the maintenance of a proper temperature."

The Cathartic Treatment of Peritonitis.—Dr. Lamphear, of Kansas City (*Med. Rev.*) says:

1. The saline treatment should be adopted early in simple, acute peritonitis.

2. Small doses of calomel may be given to mild purgation in cases seen after the disease is fully developed.

3 Cases which fail to be relieved by cathartic measures should receive early operation interference.

4. Whenever peritonitis has gone to the stage where the formation of pus is known, or even suspected, to have taken place, abdominal section and drainage are imperatively indicated.

5. When the existence of tubercular peritonitis is diagnosticated, or strongly suspected, operation (exploratory incision) is justifiable.

6. Opium is only indicated in the second stage of peritonitis, and then not because it "forms a splint," but because it relieves pain, sustains the heart and prevents shock—thus combating the tendency to death.

For Psoriasis.—Mr. Jonathan Hutchinson's favorite prescription for psoriasis is (*Arch. of Surg.*):

℞.—Acid. chrysophanic., . . . gr. x.
Liquor. carbonis detergent., . ♏ x.
Hydrargyri ammon. chlorid., gr. x.
Adipis benzoat., ... ʒ j.—M.
Fiat unguentum.

At night the patient should wash the diseased surfaces free from all scales; then, standing before a fire, rub on the ointment, devoting, if possible, half an hour to the operation.

Mr. Hutchinson somewhat doubtfully prescribes arsenic internally along with the above.

Chronic chorea is now being successfully treated by inducing upon the patient a condition of almost constant sleep for a period of some two weeks, from time to time allowing intervals of consciousness that nourishment may be taken.

The hypnotic most recommended is chloralamid in fifteen grain doses, and repeated sufficiently often to maintain a constant effect.

WHILE cross-examining Dr. Warren (says the *Montreal Weekly News*) a New York counsel declared that doctors ought to be able to give an opinion of a disease without making mistakes.

"They make fewer mistakes than lawyers," responded the physician.

"That's not so," said the counselor; "but doctors' mistakes are buried six feet under ground, and lawyers' are not."

"No," replied Warren, "but they are sometimes hung as many feet above ground."

TAPE WORM.—Says the *Times and Reg.*: Campi's treatment for tape worm is as follows: Give over night five or six fluid drachms of castor oil. Next morning give early two drachms of thymol divided into twelve doses, one to be taken every fifteen minutes. After taking it the worm will be expelled entire.

PILOCARPINE IN BELLADONNA POISONING.—Dr. McGowan (*Lancet*) relates an interesting case of belladonna poisoning, successfully treated by hypodermic injection of two doses of pilocarpine, ⅓ grain each. He considers that the drug was undoubtedly the means of saving a valuable life.

Mr. GORY, of Bournemouth (*Lancet*), has improved the binaural stethoscope by an alteration in the chest-piece which permits of its direction being altered, so that it may be readily adapted to the chest wall in any position without inconvenience to the auscultator.

IT is said (*Times & Reg.*) that the natives of New Holland perform oöphorectomy upon girls to provide a class of prostitutes who will not increase the population, as also to prevent the transmission of any natural defect, such as mutism.

SCABIES.—The London *Med. Rec.* says the following is an efficient application for scabies:

Creolin, ...	1 parts.
Balsam of Peru	20 parts.

TO STOP THE FLOW OF MILK.—It is said that the application of a solution of half an ounce of camphor in twelve ounces of turpentine, is efficient in controlling the hypersecretion of milk.

CHAPPED HANDS.—The following prescription (*Med. Mirror*) will be found useful in the majority of cases of chapped hands:

℞.—Menthol, ...	gr. xij.
Salol, ...	gr. xxx.
Olive oil, ...	♏ xxx.
Lanolin, ...	ʒ ip.

Mix. To be applied twice daily.

TYMPANITIS.—The following is recommended (*Rev. Obstet. et Gynæcol.*,)

℞.—Naphthol,
Mag. carb.,
Carbonis, āā - - - - - ʒ iss.
Ess. Menth. Pip. - - - - ♏. x
M. et div. in pulv x ij.

Sig.—One every two hours till relief is obtained.

LINIMENT FOR GOUT.—In his small work on rheumatism and gout, Dr. F. Leroy Satterlee recommends the following local application in cases of gout:

℞—Ol. gaultheriæ,
Ol. olivæ,
Lin. saponis,
Tr. aconite,
Tr. opii, ... āā ʒ ij.
M. Ft. liniment.

Sig.—Apply freely and cover with cotton batting.

NEURALGIC HEADACHE.—Dr. E. P. Hurd, in his monograph on neuralgia, advises the following prescription for headaches of all kinds:

℞—Caffeini citrat.,

Ammonii carb., . . .	āā ℈ j.
Elixir guaranæ, ...	ʒ j.—M.

Sig.—ʒ j. every hour until the pain is relieved.

RIGID PERINÆUM IN LABOR.—Dr. F. W. Southworth (*Jour. of Obs.*) uses the following solution in rigid perineum, which he considers indispensable and infallible:

℞—Chloroformi, ...	ʒ ij.
Ether sulph., ...	ʒ j.
Cologne, ...	O j.—M.

Sig.—Apply locally.

It acts quickly and well, large heads passing

the perineum without a tear, which seemed impossible without extensive rupture.

For Gonorrhœa.—Prof. Schrimmer (*Wein Med. Woch.*), speaks well of injections of salicylate of mercury in gonorrhœa. He gives:

℞.—Hydrarg. salicylat., . . . gr. ½.
Aq. destil., ... ʒ iij.—M.
Sig.—Use as injection three times a day.

By this means the discharge is checked in two or three days, and on leaving off the remedy it commences again in a mild form, consisting of mucus, and disappears of itself in a few days. In the chronic form a stronger solution is used, of say, ⅛ grain to two or three ounces of water,

Dysmenorrhœa.—A noted physician recommends the following:

℞ Pulv. camphore. . . . . gr. x
Pulv. Doveri. . . . . gr. xx
Ext. hyoscyami. . . . . gr. x
M. Ft., pil. x.
Sig.—Two pills every two hours till pain ceases.

Talmage says:—Established physicians, encourage young doctors by telling how you yourself once took measles for scarlatina. Don't walk around with a profundity and overwhelmingness of manner, as though you were one of the eternal degrees. And if you have nothing to say that is encouraging, compress your lips, put your hand over your mouth and keep still.

Vomiting of Pregnancy.—Menthol 1 part, spt. vin. rect. 20 parts, aq. dest. 150 parts, is the formula for the administration of this drug in the vomiting of pregnancy. The dose is ʒjs every hour. Dr. Gottschalk and other experienced observers have been very successful in the treatment by this means of several intractable cases.

For Exophthalmic Goitre.—Dr. A. F. Watkins recommends (*Week. Med. Rev.*) the following prescription in the treatment of exophthalmic goitre:

℞.—Picrotoxin, ... 1/10 grain.
Aqueous extract of ergot, 2½ grains.
M.—Ft. pil.
Sig.—One pill three times a day.

For Pleurodynia.—For quick and lasting relief in pleurodynia, J. Adolphus, M.D. (*Medical Age*), praises gelsemium and ammonium muriate. He gives the first in the form of the tincture, ten drops every hour; or, if the latter medicine is employed, twenty to thirty grains are administered every four to six hours.

Eczema.—Shoemaker says that for the itching of the skin so commonly met with in eczema there is nothing that affords such prompt and effective relief as a mixture of equal parts of glycerine and lime water. This may be applied to the skin as often as necessary.

Take of powdered starch. . . ½ drachm.
Subnitrate of bishmuth. . . ½ "
Spermaceti ointment. . . . ½ ounce.
Mix. Valuable for irritation in the axilla, about the groins, and erythema of the female breasts.

Woodbury says that ten grains of the bicarbonate of soda in a half-ounce of an infusion of uva ursi every two hours will relieve acute inflammation of the bladder immediately.

Lumbago.—A valuable internal remedy:
℞.—Ext. Cimicifugæ fl., - - ʒ j.
Celerina (Rio) - - - - ʒ vij.—M.
Sig.—Teaspoonful every four hours.

Royal Medical College, Kingston.—Dr. W. G. Anglin has been made Professor of Pathology and Dr. E. Ryan Demonstrator of Anatomy in the above College.

Dr. Frank Lydston, Opera House Block, Chicago, will be pleased to send a copy of his lecture on Sexual Perversion to any one enclosing a stamp.

Calcium Sulphide in Croup.—The *Med. Reg.* (*Ed.*) recommends the use of the above drug in doses of one-tenth gr. hourly for the worst cases.

The *American Lancet* says that a five per cent. solution of chloral hydrate will clear the hair of dandruff and prevent alopecia from that cause.

Pilocarpin is said to be useful in the treatment of chronic articular rheumatism.

It is said that one-half the population of Edinburgh is treated gratuitously.

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Original Communications.

THE TREATMENT OF PYOTHORAX, AND THE MECHANICAL RESULTS OF OPENING THE PLEURAL CAVITY.*

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If there is any principle in medicine which is now well established, it is that pyothorax is to be considered as an abscess, and treated as all abscesses are treated when accessible, by efficient removal of the contents. In general terms it may be said that pus once ascertained to be in the pleural cavity, every hour's delay in evacuating it is prejudicial to the patient's chance of full recovery. The very few instances in which a purulent collection within the pleura has been removed by absorption, do not warrant us in taking the least account of such a possibility in any given case. Surgical interference, therefore, is imperative as soon as the diagnosis is made. This interference may be by simple aspiration, by puncture with the insertion of a drainage tube, or by free incision with or without exsection of a portion of one or more ribs. Simple aspiration has been so often successful that it should be tried, as a rule, before subjecting the patient to a more serious operation. In children, especially, it not infrequently happens that a single aspiration effects a cure. But there is no objection to repeated aspirations provided the progress of the case under such management seems to be toward recovery. The amount and character of the fluid removed at each operation, together with the general condition of the patient, will be the criterion by which we are to judge.

As soon, however, as it becomes evident that the case is not progressing favorably, resort must be had to means which will more thoroughly remove the pus. But in doing this it is evident that from every point of view it is most desirable to secure the greatest possible amount of expansion of the lung. It is important, therefore, that we consider whether this object can be promoted in any way by a choice in the operative measures employed. This involves the entire question of the mechanism of the respiration after the thorax has been opened. To understand this fully we must first examine the results of opening the chest of a previously healthy subject, as the principles involved are merely modified, not entirely changed, by the supervention of disease. Some twenty years ago, I had occasion to make extensive researches in this direction in reference to penetrating wounds of the chest, and in my present paper, I shall draw largely upon one which I published at the time, and, if I seem to include more than properly belongs to my subject, it will be because the observations have to be taken as a whole to be fairly intelligible.

When an opening is made through the chest wall, one of three conditions of the lung may result. It may collapse entirely, it may collapse partially, or it may retain its normal volume. Which of these results will follow, depends upon the size and the location of the wound.

Premising that I mean by complete collapse that condition of the lung, in which it is neither distended nor compressed by any extraneous force, but has simply the dimensions assigned to it by its own elasticity, I believe that this condition can occur only when the wound is so large as to nullify entirely the movement of that side, or on the other hand, when the wound has become entirely closed leaving the pleural cavity filled with air; and that in neither cases will it continue during both acts of respiration.

Let us suppose, for purposes of illustration, that

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we have an opening in the chest wall, the size of which we can increase or diminish at pleasure.

We will, then, first consider the case when the wound is large and free, so free that the air may pass through it in either direction without any obstruction. In this case, unless prevented by adhesions, or by a condition to which I shall advert hereafter, the lung contracts as completely as it would do if it were removed from the chest. But this complete contraction continues only during inspiration. With every expiratory act the lung is slightly inflated. This is owing to the fact that the glottis is not sufficiently large to allow perfectly free exit to the air from the lung on the uninjured side. A portion of this air is therefore forced through the bronchial connections into the opposite lung, which is perfectly free to expand, since the air by which it is surrounded has easy egress from the chest.

Indeed, were it not for the elasticity of the lung, the quantity of air which would enter it would be to the quantity actually exhaled as the area of its bronchus to the area of the glottis.

I have here a mechanical contrivance designed to illustrate the effect upon respiration resulting from wounds of the chest of different sizes. It consists of two bellows, placed side by side, representing the two cavities of the chest, and made to move simultaneously by means of a handle which is common to both. Connected with each bellows is a tube representing the bronchus; the two tubes merging into one which answers to the trachea. Each bellows has a rubber bag within it representing the lung and communicating with the bronchus. The movements of the bags are exposed to view by means of plates of glass set in the tops of the bellows. Each bellows is provided also with an opening designed to represent a wound of the chest-wall, and which may be partly or wholly closed by means of a slide.

On withdrawing the slide of one bellows entirely and detaching the tube by which this bellows is connected with the other, it will be seen that the movements of the handle have no effect whatever upon the bag. But upon replacing the tube you perceive that each time the handle is depressed the bag is partially inflated with air driven from the other bellows.

When the respiration is quiet and regular, the expansion of the collapsed lung with each expiration is comparatively slight; but when the expiratory movement is more forcible and at the same time the glottis is partially closed, a very large portion of the air from the sound lung may be forced into the one collapsed; and two or three such expirations, in rapid succession, may be enough to distend it completely and even to force a portion of it out through the wound, producing hernia of the lung. These points are illustrated in the following experiment:

A large dog was placed completely under the influence of chlorform and an opening three inches in length made in the ninth intercostal space on the left side. The lung immediately collapsed, but could be seen to expand slightly with each expiration, subsiding again with each inspiration. As the effect of the chloroform passed off, and consciousness began to return, there was an attempt at a vocal expression of suffering with each expiratory act. This caused a decided increase of the distention of the lung. The wound being closed with the fingers, this vocal effort resulted in a faint moan, which ceased immediately when the wound was uncovered. On introducing an instrument into the back of the neck, with intention of breaking up the medulla oblongata, loud cries were uttered and the lung immediately filled the chest and protuded from the wound.

It is to be remarked that, in this experiment, moderate efforts at phonation were ineffectual so long as the wound remained open. This was, no doubt, owing to the large amount of air which passed from the lung on the uninjured side into the other lung, not leaving enough to pass through the glottis to cause vibration of the vocal chords. But the moment the wound was closed the air imprisoned in the pleural cavity prevented the expansion of the crippled lung, compelling the entire quantity of air from the sound lung to pass out through the glottis, and phonation was the result.

The extreme pain from the introduction of the instrument caused an extraordinary vocal effort, involving a violent expulsion of the air from the sound lung and at the same time a further diminution of the opening of the glottis, both of which circumstances contributed to the expansion of the collapsed lung.

Similar observations have been recorded by various writers, whose explanations are substantially that which I have given. But they all seem to

have overlooked the fact that the converse of this action takes place in inspiration, and that, with the size of wound which we are now considering, the collapse of the lung during inspiration is not merely the passive result of the elasticity of the latter, but the active result of the exhaustion of the air from it by the expansion of its fellow, with which it is in direct communication. This can readily be seen by means of the apparatus. You will perceive that if the bag is left to itself, at the close of expiration it collapses slowly, but if the handle of the bellows is immediately raised again the collapse is instantaneous.

Thus we see that with this size of the wound the lung remains entirely unaffected by the motion of its own side of the chest, while it has a movement which results from the expansion and contraction of the opposite thoracic cavity, and which is precisely the reverse of its normal action.

We also perceive that the sound lung does not receive its entire supply of air from the external atmosphere, but that a portion of the supply is vitiated air from the other lung. The withdrawal of this amount of air necessitates the entrance of an equal amount through the wound, in addition to the quantity required by the expansion of the wounded side.

But let us now suppose the wound, instead of being sufficiently free to present no obstruction to the passage of air, to be so much reduced in size as not to allow the entrance of quite enough air to keep pace with the expansion of the chest, and the additional demand by the sound lung. The moment this degree of narrowness of the wound is attained, sufficient air will pass through the trachea into the collapsed lung to supply the deficiency. The close of inspiration, therefore, will find the lung not completely collapsed as in the former case, but slightly expanded. At the same time a new element comes into play in the expiratory act. The air contained in the pleural cavity, not finding perfectly free exit through the wound, is compressed against the lung, and offers an obstacle to the ready passage of air into it from the opposite side. The consequence is a less degree of inflation during expiration than would otherwise take place.

The gross result, therefore, of slightly narrowing the wound has been to diminish the play of the lung, the expansion during expiration being lessened, and the collapse on inspiration rendered less complete.

Hence it is evident that by progressively diminishing the wound, a point would be reached at which the lung would remain motionless, in a state of partial expansion, the various forces operating upon it (including its own elasticity) exactly neutralizing each other.

If now there were intervals of quiescence as in normal respiration, the lung would gradually collapse again by its own elasticity; but in embarrassed respiration these intervals never exist. Inspiration immediately follows expiration, and thus the effect is kept up and the lung not permitted to subside. At the same time, as seen through the wound, the lung has an appearance of moving, which results from the rising and falling of the ribs. This appearance is so deceptive, that I have introduced an instrument and touched the lung before I could be fully satisfied that it was motionless.

The area of the wound corresponding to the condition in question will be found to have a definite relation to one-half the area of the glottis. And here I may remark in parenthesis, that it is curious with what unanimity authors agree in instituting comparisons between the size of a wound in the chest-wall and the entire area of the aperture between the vocal chords, forgetting that this aperture has to supply air to the sound as well as to the disabled lung, and that therefore only half its area should be taken for comparison with a wound of one side of the chest.

(To be continued.)

ADDRESS IN MEDICINE.*

BY L. C. PREVOST, M.D., OTTAWA.

(Continued from Oct. number.)

At the same meeting Sir J. Lister showed himself to be a strong partisan of Metschnikoff's theory of phagocytosis, and, in the course of his speech, he attributed the usual harmlessness of non-antiseptic silk ligatures to the imbibition of the threads by leucocytes, which then destroy bacteria, and," he added, " how little did the late Conheim think that his discovery of diapedesis of leucocytes in inflamma-

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tion would, later on, acquire such an importance in the pathology of infectious diseases."

Infectious agents can injure the organism by a mere mechanical action; they may by their abundance obstruct the capillaries of certain organs.

They possess besides a more purely vital action. To live, they want matter to consume, and living in our organism, they cannot consume but the matter destined to the nutrition of the cells of the latter. Thus, a vital competition is established between the cells of the parasite and the cells of the infected organism obliged to support new guests.

But that is not all. It has been thoroughly demonstrated, owing to recent investigations, that the pathogenic microbes secrete special toxic substances, real azoted bases, similar to the alkaloids extracted from vegetables and which, dissolved in the fluids of the organism, produce a true poisoning. Thus the microbe, the figured element, would be the factor of infection, and the soluble products which it secretes, that is, the ptomaines, and the leucomaines, the agents of poisoning.

Our organism may be considered as a receptacle and a regular laboratory of toxic matters. Even in the normal state, the digestive tube is the part of our body wherein can be found the greatest number of microbes. It incessantly receives them from without, through air, aliments and drinks. Some come from the cavities in communication with œsophagus, namely: the mouth, nasal fossæ, pharynx and lungs. They exist in small quantity in the stomach where they are killed by the chlorydric acid of the gastric juice; they are more numerous in the small intestine, but it is in the large intestine that an enormous quantity of them is to be found. These microbes feed upon what we have prepared for our own nutrition; they are our guests, our parasites, and live upon the portion of our aliments which we do not consume, clients who eat the leavings of the table. Sometimes they work for us, some of them, in fact, play a certain *rôle* in the digestive transformations of alimentary substances, but more often they openly work against us. It is they which incessantly fabricate in the digestive tube, compound ammonia, such as leucin, tyrosin, indol, phenol, scatol, and various alkaloids, which render fæcal matters toxic, a fact experimentally demonstrated, particularly by Etich and Bouchard.

Well, in spite of all these toxic matters contained in our digestive tube, we however escape poisoning, because the organism is incessantly working to be rid of them.

If, owing to phagocytosis and other means, the economy defends itself against the invasion of microbes, it is not either unarmed against the poisoning which may be the result of their toxic products. Emunctories constitute a real safety-valve, the physiological integrity of which shelters us against the accidents which otherwise would not fail to reach us. The kidneys, for instance, slowly but surely eliminate a certain quantity of these poisons. Bouchard has showed that the adult and healthy man eliminates in the twenty-four hours, for each kilogram of his weight, a quantity of urinary poison capable of killing 464 grams of living matter. It takes on an average, two days and four hours for a man to fabricate a mass of urinary poison sufficient to kill himself.

But the kidney is not the only safeguard of organism against poisoning of intestinal origin. The liver destroys half of the putrid matters coming from the portal vein. The system of defence, at last, is completed by oxydation, by the combustion which takes place in the blood and all the cells of the economy.

Thus, micro-organisms introduced into our body, provoke around them a reaction to bring back the individual to the normal state; the organism may remain victorious, cure is effected; it may be subdued, then it succumbs; but let the cause persist, let the organism strive to struggle in vain against an incessantly reviving adversary; and instead of being transient, let the cause be permanent, let the microbe persist within ourselves and the disease then will be chronic.

From the day that it was demonstrated that miasma, as well as virus, were nothing else than the germs of the air, that is, the microbes and their spores, the whole pathology became, as it were, illuminated by a resplendent light, the advantages of which can be calculated by the number of works accomplished in this direction within the last fifteen years.

Surgery was first to derive benefit from the memorable discoveries of Pasteur and his disciples on ferments and microbes. Thus, we had Guerin's and Lister's dressings. The former, in order to shelter his wounded against the germs of the air, would envelope the limb with a thick layer of

wadding maintained by a roller bandage. Results were simply marvellous: rapid and complete cure, with hardly any suppuration.

Lister, believing that the vapors of carbolic acid were incompatible with the existence of germs, which are paralysed, destroyed by this agent, would not hereafter operate unless in a mist saturated with these vapors. This conception, although recognized to-day as erroneous in its application, had nevertheless for a result the disinfection of the instruments and the hands of the operator.

It was the discovery of antiseptism which had in science such a resounding, and which confirmed the exactness and accuracy of the germ theory. We heard everywhere of nothing else but antiseptic dressings, and owing to this new method, major, as well as minor operations succeeded to everyone's wish and great surgical traumatism became a play, where formerly surgeons hardly dared use their knives even to open an abscess. It is owing to this method that surgeons have to-day lost this extreme fear they formerly had of dealing with joint diseases. A few years ago, it was an axiom in surgery that the opening of the knee-joint had for corollary the amputation of the thigh, and often the death of the patient. Complication of wounds have disappeared with antiseptic dressings; erysipelas, lymphangitis, septicemia pyohemia, all known to-day as being produced by certain microbes, shall have hereafter but an historical interest. It is again antisepsy which explains the boldness and the success of operations in abdominal surgery. Without it, surgeons would not lay such rash hands on peritoneum, liver, stomach, intestines, bladder, ovaries, and uterus. We appeal also, at last, to the memory of ancient accoucheurs to proclaim the marvels realized in obstetrics by antisepsy. Microbic doctrines are certainly not accepted without contention, but whether the germ theory is rejected or not, it is nevertheless indisputable that the immense progress accomplished within the last twenty years in the treatment of wounds, is the consequence of the doctrines actually admitted upon the origin and nature of septic complications. Even if they had no other effect than to impose upon all scrupulous cleanliness, the result is enormous. Owing, in fact to antisepsy or asepsy, we obtain rapid cure and considerable lowering of mortality, although we operate to-day a great deal more than formerly.

Medicine as well as surgery was not slow either to derive benefit from the discoveries realized in bacteriology. Microbic doctrine has had the result of introducing into the study and treatment of diseases, the notice of etiology. Not long ago, the effects of diseases constituted the most special object of our attention; to-day it is pathogeny which guides the clinician and the therapeutist. Germ theory is, amongst all others, the only one which is not compelled to resort to these vague expressions which ancient medicine was satisfied with, in order to explain contagion of diseases. All those denominations, such as miasma, virus, etc., we were using less than twenty years ago, to design that something unknown which constituted the agent of contagion could not be defined without our having recourse to a catalytic action which had no other utility than to further remove the solution of the problem and to substitute an unknown for another unknown.

Bouley's axiom that every infectious disease is a function of microbes is becoming more and more confirmed; every day brings us the discovery of a new pathogenic microbe.

We are not satisfied with discovering microbes, but we study their biology, we are learning how to modify their function and consequently their virulence.

Pasteur's merit, in fact, does not lie so much in the discovery of the living nature of contagion of diseases, as in the processes he has been making use of in the culture of their virulent principle and in the means he employed to attenuate their noxious properties.

Is it necessary, gentlemen, that I should here remind you of the brilliant results achieved by this immortal genius, with regard to the preventive treatment of anthrax in animals? The vaccine against that plague is to-day forwarded to the whole world and has already saved numerous flocks from an almost certain destruction. It has given such results that we can estimate to several millions the economy realized for the benefit of agriculture. Industry and commerce have therefrom derived such great profits, that France thought it her duty to award that illustrious man a national recompense and to place him at the highest rank amongst the benefactors of his country and of the whole world.

But far more important, are for us, the results obtained by the first application to man of Pasteur-

ian vaccination, that is, the prevention of rabies. Before Pasteur, the mortality of rabies was 40 to 47 per 100. Well, from past experience, wherever the Pasteurian method has been carried out, the mortality has fallen, on an average, to about 1.5 cent. This is an unquestionable gain and we cannot too highly emphasize these figures, when in the presence of those who gainsay Pasteur's method.

Surely, microbic doctrine is still very recent, microbiology is far from having said its last word. However, we are already able to throw some light in certain cases of doubtful diagnosis, owing to well-known microbes, easily recognizable by their form, their culture or their inoculation. How many diseases have to-day, owing to bacteriological investigations, lost the mysteries which surrounded their etiology and their nature! Do we not actually possess a better knowledge of typhoid fever, since Eberth has laid down precise notions concerning the pathogenic bacillus of that disease? We know where this microbe is located within, as well as without the organism. It is a well-known fact that it penetrates the economy, especially with the water we drink, and that it is carried away by the patient's dejections, through which contagion is propagated.

Koch, by his researches, has contributed to throw light upon the etiology of cholera, and Gamalcia has already, by his experiments on animals, succeeded in finding the vaccine against this affection.

Pneumonia, which has always been considered as the type of inflammatory diseases, "a *frigore*," has become an infectious disease, owing to the discoveries of Talamon, Frankel and Friedlander. Like all infectious diseases, it follows a regular cycle and is doomed, so to speak, to go through all its periods, which no remedial agents can cut short. Thus are explained these epidemics of pneumonia, held as so strange, and which have repeatedly been signalled in the past medical literature. Thus, again, is explained the crusade undertaken twenty years ago by Bennett, Todd, Behier and others, against those depressing means of treatment, such as bloodletting, and emetics, which had the pretension of cutting short the symptoms from the beginning.

Laveran has discovered the microbes of malaria, those merciless little beings which will not allow man to live with impunity on the soil they inhabit. Several observers, amongst whom I am proud to mention one of our most illustrious compatriots, Dr. Osler, have all practically confirmed Laveran's observations, whose important and patient researches have been very eloquently extolled by Osler, in the following terms: "Working as he did, alone in Algeria, under circumstances the reverse of favorable, without proper laboratory equipment, without the stimulus to be found in the association of men in large cities, it is not only in the highest degree creditable, but most encouraging, that an army surgeon, actively engaged in the duties pertaining to his battalion, could accomplish so thorough a piece of work, requiring but little subsequent correction and receiving at all hands ample confirmation."

Wood and Formad, two Americans, have also discovered and isolated the microbe of diphtheria. Later on, Klebs has given us more precise notions on this microbe, and quite recently, Roux and Yersin have made discoveries which will hereafter guide the study of diphtheria in a new way. These authors, in showing that it is the secreted poison which in spreading, generalizes the infection, that the microbe remains localized within the false membranes, have at once destroyed the idea we had concerning this affection. It was, as we believed, a general disease at the first onset, angina, croup being only its manifestations; actually we know that the affection is at first local, that we are able, in combating it at the beginning, to prevent infection from taking place; and, if we can find the means of destroying in good time, in the membranes, the diphtheritic agent before it is generalized, we shall have considerably diminished, I fancy, the mortality of that terrible plague.

And how grateful must we not be to the illustrious German bacteriologist, Koch, for his important discoveries concerning tuberculosis? The preventive and curative treatment of this disease has recently received a direction which, doubtless, will check the increase of this formidable affection which decimates the populations of the whole world.

At last, Bouchard's investigations have thrown a new light upon the pathology of the digestive system. In pointing out the *rôle* played, in digestion, by micro-organisms, he has given us the explanation of the strange phenomena offered by those who suffer from what is commonly called gastric

embarrassment, indigestion, biliousness, flatulence, dyspepsia. It is to the products secreted by these ferments, and to their penetration into the economy that we owe these symptoms, which are but the manifestations of a real poisoning. To prevent the latter, we have a double means at our disposal: destroy the microbes by intestinal antisepsy, and expel them from the digestive tube by purgatives. By the way, I shall here remark how much the interesting researches on putrid fermentations of the intestines, justify the traditional medication of our forefathers and the physicians ridiculed by Molière, were not altogether wrong after all, to give so much importance to the reiterated expulsion of atrabiliary humors upon which depended most of the evils that afflicted their clients.

And again, gentlemen, I could speak of the bacteria discovered by Hansen in leprosy; of that of erysipelas discovered by Cornil and Fehlensen; of Pasteur's staphylococcus in osteomyelitis; of Neisser's gonococcus in gonorrhœa, and of so many other microscopic malefactors started out of their dens by clever, patient observers. But I fear I have already long ago overreached the limits of your patience. I humbly beg pardon for the tedious task I may have imposed upon those among you who know all these things. But I conceived the idea of the present work, especially with regard to those who still hesitate to acknowledge the accuracy and importance of the doctrines I so enthusiastically support.

As far as I am concerned, I confess that I could not help being seduced by the hopes that the marvellous discoveries in bacteriology allow us to entertain for the future.

Bacteriology, in fact, has produced a revolution in the medical world. The veil which for so many centuries covered the arcanum of science, seems to be rent, owing to its oldness itself, and new horizons of inexpressible richness are laid open. A whole new world has sprung up before our eyes. We have scarcely passed its threshold, and surely there remains a great deal yet to be seen and learned. It is not sufficient to know that there exist microbes, and that they are the agents of most of our diseases; we must find the means of combating them, of destroying them, and of opposing their noxious action in the economy; since, after all, the physician's aim is to cure or relieve those who suffer. Unfortunately, if so far we have succeeded in killing micro-organisms "in vitro," it is nevertheless true that the means at our disposal cannot generally reach them in diseases without destroying in the meantime the organism which is like their bulwark. We know the foe, we know where it lies, we possess against it powerful means of destruction; but squatted in the living cell, as within an entrenchment, it sets us at defiance, and slowly distils its poison. But, in this struggle, we must and we shall, I hope, some day become victors. Our anxiety, hereafter, must be to look for the action of each antiseptic upon each microbe, to determine the agents that act most energetically upon it, and to discover amongst these agents, those that are the most harmless to the human and animal being. Empirically we have already found out the special antiseptic power of certain therapeutical agents and their elective action against a given infection. Syphilis has been cured by mercury for several centuries, and if quinine so rapidly and so easily triumphs over malaria, is it not because it possesses a noxious action upon the infectious flagellum? The so remarkable efficacy of salicylic acid in rheumatism, is according to all probability explicable by an antiseptic action.

But until the day that we shall have discovered a specific for every disease, what I willingly call the philosopher's stone in pathology, we must not remain inactive, and if we cannot yet surely and directly act against the microbes, we must endeavor to modify the soil-object of their covetousness, if not already in their power, and try to render it unfavorable for their development and multiplication. By all the means put at our disposal, by hygiene and therapeutics, we must strive to provoke that particular activity of nutrition which secures the triumph of organism in the struggle with the infectious agents. All that accelerates nutrition contributes to render the organism refractory to the invasion of microbes and *vice versa*, bad hygienic conditions, great traumatism, impression of cold, mental depressions in bringing impediment to the essential phenomena of nutrition, hinder more or less the cellular metamorphosis, and assimilate the organism to the dead matter so eminently favorable to the development of microbes.

By the specifics only we shall be the artisans of cure, but by the modification impressed to nutrition we shall help the organism to cure itself.

Therefore, let us look upon the future with confidence. We shall die some day, since the progress and discoveries of science, in spite of their greatness, have not yet succeeded in granting us immortality, but what we shall not see, our children, I have no doubt, will.

THE VALUE OF THE HIGHER PITCHED NOTE OF THE RIGHT APEX IN INCIPIENT PHTHISIS.

BY J. HOWE ADAMS, M.D.,

Physician to Medical Dispensary, University Hospital, Philadelphia.

It is a true maxim that no single sign or symptom should be depended on in physical diagnosis; still, at the same time, in cases of suspected trouble, where only slight signs and symptoms can be found; where a positive decision is often demanded by the patient, and anxiously sought by the physician, every little straw adds great weight to the general conception of the case. In no class of cases is this more true than in suspected instances of incipient consumption. This disease is so widespread, and its results so well-known and apparent to the laity, that it is presented in its incipiency oftener to the physician than probably any other chronic disease. Hence, in studying the picture which this dread disease presents at its onset, it is well to consider the due force of all its physical signs. One symptom common to these cases is undoubtedly involved in some uncertainty; this is the higher pitched note often found at the right apex.

Phthisis ordinarily expresses itself first at the apex of one or the other lung; the tissue alterations include change of resonance shown in the pitch and quality. In the region which is involved, the pitch of the percussion note is elevated, as compared with other regions, especially the corresponding side of the chest. The quality of the note becomes more vesiculo-tympanitic. This change is dependent on the diminished elasticity and increased tension in the pulmonary tissue in the involved area.

But, as stated above, in physiological lungs, the right apex often has a higher pitched note, and the authorities on the subject all caution the physical diagnostician to remember this fact in actual practice; for here, in normal lungs, we often find one sign of approaching phthisis. Of course, it takes other signs to complete the diagnosis; the change in rhythm, the harsh character of the respiratory murmur, the change in vocal fremitus and resonance and inspection, besides the loss of weight, the night sweats, and the little increase in temperature, all tell of approaching consolidation. But the physician, groping in the dark, starting with the suspicion that something is wrong, getting this note at the outset, is often misled. At the Medical Dispensary of the University Hospital, there has been considerable study of this note and its variation in health; with the result that it has been determined that, in every normal case examined, there existed some increase in the pitch on the right side. This deviation, in some cases, was most marked, being greater, in many instances, than the notes in a case of genuine, well-advanced phthisis. So suspicious were some lungs examined, that only after long observation could it be decided that no actual trouble existed. Nearly all authorities on this subject state that only a proportion of healthy lungs show this higher pitched note on the right apex, and make no mention at all that this note may be widely divergent from its fellow note at the left apex. Undoubtedly, it requires long practice to detect the higher note in some cases, and the experience at the Medical Dispensary here may be exceptional, yet it is a fact worth emphasizing.

Take the history of the following case, which will illustrate the difficulty of deciding in such cases:

Mrs. B, aged 30, colored, has borne eight children; run down with overwork. History of cough for several months, loss of weight, debilitated, occasional night sweats. Physical examination revealed that there *seemed* to be a slight decrease in movement of the right apex; on percussion, the note was *considerably* higher; on auscultation, the breathing was possibly a little prolonged and slightly harsh. Vocal fremitus and resonance, negative. Other signs, negative; no bacilli in sputum. She was placed on a supportive treatment. Her surroundings were not first-class; her food was not of the best. She was depressed

the desertion of her husband; she had a nursing baby. It was in the middle of a raw winter, full of sudden changes, which made Phildelphia one of the worst cities in the country for consumptives. She was colored, which was an additional predisposing drawback. Despite these unfavorable circumstances, she continued to improve. The signs grew more negative, until, with the exception of the higher pitched note, she is perfectly well. It is probable that the other changes noticed at first came from the expectation that other familiar signs would follow the history taken. This history has not been exceptional in the dispensary clinic; cases of "cured consumption" occasionally crop up. Undoubtedly, they arose from a few suspicious subjective symptoms, together with the high pitched note at the right apex.

In any case of this sort, it is well not to raise hopes too high. Many, undoubtedly the majority of cases, will prove to be tubercular, but here and there will be a case which can escape through proper treatment. So when our high-pitched, right apex patients lose flesh, or get a cough, while not relaxing vigilance or caution, let us not be too gloomy in our hopes at the outset.

THE BRAIN AND SPINAL CORD.

BY THOMAS W. POOLE, M.D., LINDSAY, ONT.

They may talk of the brain and point with pride,
To its arching dome and its basis wide;
To its cortical cells and its ganglia deep,
And the treasures of thought its chambers keep,
To the wonders which eye and ear enthral,
But the spinal cord surpasses them all.

For the eye will close, and the brain will tire,
And our thought in its very source expire;
While the lordly brow with lowered crest,
Seeks the downy pillow in needed rest;
But the sentinel cord its vigil keeps,
For "the spinal system never sleeps."

The brain may suffice for our waking hours,
When the mind controls its wayward powers.
'Tis by it we laugh and by it we weep;
It leaves us to die when it goes to sleep.
But the tireless cord with a ceaseless play
Is wakeful and active both night and day.

When the powers of life seem about to yield,
The brain is the first to resign the field;
But the spinal cord holds out to the last,
And it often conquers when hope is past,
Survives the weak maunderings of the brain,
And ushers us back to the world again.

Then here is a toast I would have you hail,
The spinal cord from the bulb to the tail.
You surely must honor the famous spot
Where Flourens located "the vital knot."
The cord! the cord! with its mysteries deep,
Which the pyramids guard and the ganglia keep,
The first to grow and the last to fail,
The spinal cord from the bulb to the tail.

Lindsay, October, 1890.

Correspondence.

To the Editor of the CANADA LANCET.

DEAR SIR,—At a meeting of the medical men of Muskoka, Parry Sound, and Nipissing, which took place in Huntsville, last August, to inaugurate a medical society, the following officers were elected: Dr. Howland, President, Drs. Bridgland, B. M. Walton and Thos. Walton, Vice-Presidents; Dr. Hart, Reporter, and Dr. Topp, Sec.-Treas.

It was decided that the name of this association be the "Muskoka, Parry Sound, and Nipissing Medical Association."

Some very interesting papers were read by some of the medical men present, especially that by Dr. Bridgland, on "Pointers in Practice," obtained from a recent course of Post Graduate in New York. The society bids fair to be a success.

I am, yours, etc.,
R. A. TOPP, *Sec.*

Bracebridge, Oct. 3rd, 1890.

To the Editor of the CANADA LANCET.

SIR,—It may not be inopportune for me at the present time to refer to the attitude which, by the public press, I have noticed the Local Board of Health, which is only a committee of the Council, has taken with regard to the appointment of my successor in the position of Medical Health Officer for Toronto.

From the inception of the Local Board under the Public Health Act of 1884, it has appeared that the work to be done by it was considered as but one of the functions of the Council, and hence during all my period of office I found that it was with the greatest difficulty that I could get any matter discussed except along the lines of its possible effect upon the interests of the individual Alderman whose constituent any special offender against the laws might be; nor indeed in many instances was it possible to obtain the Board's permission to take active steps for the removal of

many flagrant nuisances since someone's particular friend would thereby be, in his own estimation financially injured. Now had the complexion of the Board been composed of a fair share of medical practitioners the many questions demanding prompt action would have been considered on their merits. This however does not seem to be what the Council wish, since I see that by the Local Board's action, in their advertising for applicants for the vacant position, they have ignored wholly the sub-committee of medical men who were asked to co-operate with them, although it was stated at a recent meeting of the Council that the Board would fix a time for consultation with such committee.

I can assure the medical profession that unless they take strong action in this matter their views will continue to be ignored. Some Aldermen do not want an independent Board nor perhaps an independent Medical Health Officer.

WM. CANNIFF, M.D., M.R.C.S., Eng.

15 Peter St., Oct. 1890.

Selected Articles.

ANÆSTHESIA.

An Address delivered before the International Medical Congress, Berlin, August 6, 1890.

BY H. C. WOOD, M.D., LL.D.,

Prof. of Therapeutics in the University of Pennsylvania.

(*Continued from Oct. No.*)

The experiments have all been made upon dogs, by one plan. The carotid artery and also the trachea having been connected with a recording drum, so that the movements of the circulation and the respiration could be consecutively recorded, the animal was anæsthetized, and when the blood-pressure had fallen almost to zero, and the respiration had ceased, or nearly ceased, as the case might be, the remedy to be tried was injected into the jugular vein, through a canula which had been previously inserted.

The more important remedies which have been used by clinicians for the averting of threatened death during anæsthesia, are ether, alcohol, ammonia, nitrite of amyl, digitalis, atropine, and caffeine, alterations of position, and artificial respiration.

Although, at least in America, hypodermic injections of ether have been frequently employed even in ether accidents, such use is so absolutely absurd that it does not seem to me to require any experimental evidence of its futility. Ether in the blood acts as ether, whether it finds entrance through the lungs, through the rectum, or through the cellular tissue; and the man who would inject ether hypodermically into a patient who is dying from ether, should, to be logical, also saturate a sponge with the ether and crowd it upon his unfortunate victim.

Instead of simply stating the results obtained in my experiments, I have thought it would be more interesting to show reproductions from some of my tracings. The first drug that I shall report upon is caffeine. I have injected it during the cardiac failure produced by choloroform, in doses, varying from 3 to 7½ grains, and have never been able to perceive any distinct alteration in the arterial pressure, and no consistent distinct change of the pulse either in number or force. So far as the experiments go, they certainly indicate that the drug has no influence upon the heart that is being overpowered by chloroform. I may also state here, that it is not possible in any of my tracings to make out any influence exerted by caffeine upon the respiration.

FIG. 4.

Anæsthesia complete. Dog still breathing, ½ gramme of caffeine injected at X X, each.

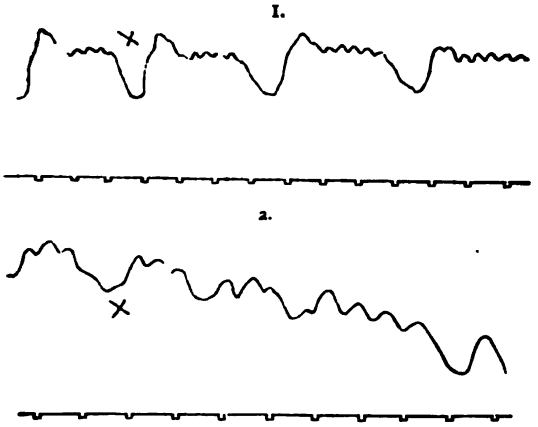
With atropine, I have made a few experiments, the results being almost as negative as with caffeine. Ten c. c. of a 2-per-cent. solution of atropine injected into the jugular vein of a chloroformed animal, altered the rate of the pulse-beat, but had no apparent effect or influence upon the arterial pressure, or upon the respiration, and in no wise prevented final cardiac arrest.

Of all drugs, that which I think is usually most relied upon by clinicians as a cardiac stimulant in anæsthesia, as in other cases of heart-failure, is alcohol. The chemical and physiological relations of alcohol to ether and chloroform are, however, so close, that many years ago I became very doubtful of the value of this drug as a stimulant to a heart depressed by anæsthesia.

These doubts continually grew stronger from what I saw and read as to the effects of the administration of alcohol during anæsthesia, and were finally changed into conviction by the experiments of R. Dubois (*Progrès Médical*, 1883, xi. 951), who found that in the animal to which alcohol has been freely given, much less chloroform is required than in the normal animal, to anæsthetize or to kill; or in other words, that alcohol intensifies the influence of chloroform and lessens the fatal dose.

In my own experiments with alcohol an 80-per-cent. fluid was used, diluted with water. The amount injected into the jugular vein varied in the different experiments from 5 to 20 c. c.; and in no case have I been able to detect any increase in the size of the pulse, or in the arterial pressure, produced by alcohol, when the heart was failing during advanced chloroform anæsthesia. On the other hand, on several occasions, the larger amounts of alcohol apparently greatly increased the rapidity of the fall of the arterial pressure, and aided materially in extinguishing the pulse-rate.

FIG. 5.



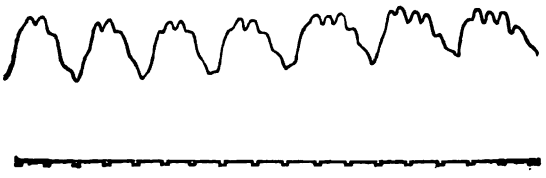
Tracings showing effects of alcohol injection.
No. 1. four cubic centimetres of 80 per cent. at X.
No. 2. five cubic centimeters of 80 per cent. at X.

FIG. 6.

Experiment showing the effect of injecting twenty cubic centimetres of alcohol in advanced chloroform anæsthesia. Injection made at the beginning of tracing between X and X.

The effects of ammonia upon the failing heart of chloroform anæsthesia, has been in my experiments uncertain; sometimes distinct, although very fugacious and sometimes imperceptible. Twenty cubic centimetres of a 10-per-cent. solution of aqua ammoniæ fortior (U. S. Pharmacopœia), in some case produced an immediate rise in the arterial pressure, and even fugaciously registered itself in the respiratory rate, but perhaps more frequently it failed in its influence.

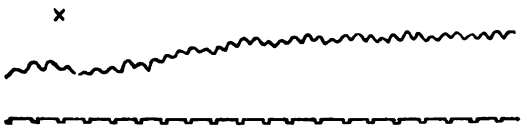
FIG. 7.



Injection of twenty cubic centimetres of a 10-per-cent. solution of aqua ammoniæ fortior. Injection given just after beginning of tracing.

The influence of injections of digitalis has been in a number of experiments, very pronouced in producing a persistent gradual rise of the arterial pressure with an increase in the size of the individual pulse-rate. In several instances, death was apparently averted by its injection and I saw in one or two cases where large amounts of the digitalis had been employed, sudden systolic cardiac arrest, indicating that digitalis, if in sufficient amount, is able to arrest itself victoriously in opposition to chloroform. Moreover, when I have given chloroform to dogs whose hearts were already under the influence of digitalis, there has seemed to be a peculiar steadying or sustaining power combating the circulatory depression naturally produced by the anæsthetic, and I believe that in all cases of weak heart in man a full dose of digitalis before the administration of chloroform would greatly lessen the danger of cardiac collapse.

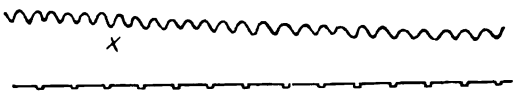
FIG. 8.



Tracing showing effect of five cubic centimetres of tincture of digitalis in advanced chloroform anæsthesia. Injection given at X.

With the nitrite of amyl four experiments were made; in some of these from 4 to 10 drops of the nitrite of amyl were injected in the jugular vein; in others the nitrite was used by inhalation. No distinct effect upon the arterial pressure was in any instance produced, and usually no alteration in the size of the pulse-waves, although sometimes the pulse did appear to be a little fuller.

FIG. 9.

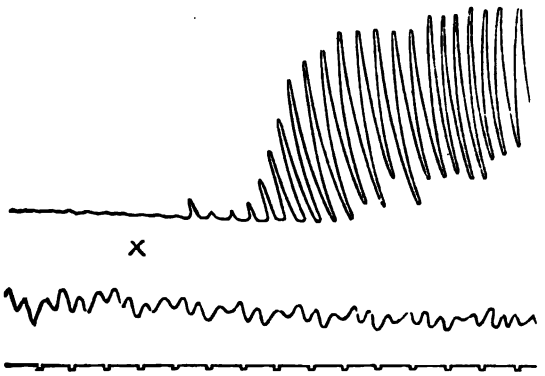


Tracing showing effect of nitrite of amyl, given freely by inhalation, upon the circulation. Inhalation begun at X.

Of all my experimental results, those which have been reached with strychnine have been the most surprising. The injection of strychnine into the jugular vein usually produced a gradual rise of the arterial pressure, and always caused an extraordinary and rapid increase in the rate and extent of the respiration. Thus I have seen the respiration, which had practically ceased for ten seconds, suddenly, under the influence of an injection of two-tenths of a grain of strychnine, become at once very large and full, and reach a rate of 130 a minute.

A series of elaborate experiments made upon the effect of the position of the animal on the blood-pressure in the carotid and other arteries, has very clearly proven that the body of the animal whose circulation has been paralyzed by chloroform, acts in a measure like a tube filed with fluid. Thus if the feet of the dog were raised vertically above the head, whilst the latter remained upon the table, an immediate rise of pressure occurred, even though the heart had entirely ceased beating; provided that the head of the animal was kept upon a level with the table. If, however,

FIG. 10.



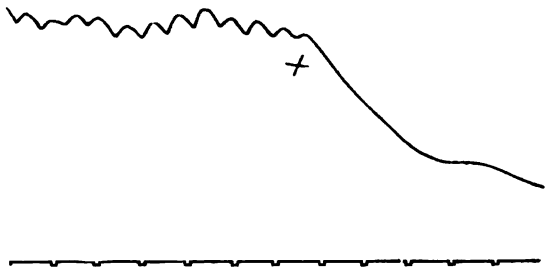
Tracing showing effect of injection of strychnine, after breathing had ceased, in an advanced chloroform anæsthesia. 0.193 grain of sulphate was injected at X.

the head of the animal, was depressed below the level of the table for a distance equal to, or greater than the length of the body of the animal, a decrease of the arterial pressure occured at once, although the animal was in a vertical position. The phenomena observed were precisely such as would have been produced if the canula had been inserted into a tube filled with fluid, instead of into the carotid artery, and the elevation and depression of this tube had registered itself on the recording drum, in obedience to the ordinary laws of hydrostatics. The phenomena were entirely independent of any beat of the heart, and were readily produced when the animal was dead, provided the death had not occurred too long previously. Sometimes, even a very few minutes after the cessation of the heart-beat, it was impossible to produce the changes of pressure upon the drum. This, I believe, to have been due to coagulation of the blood, occurring very early after death to a sufficient extent to interfere with the liquid properties of the fluid. In no case was any effect upon the respiration produced by change in position of the animal. In a number of cases, however, when the feet were elevated the heart, which had entirely ceased beating, recommenced its work, and I have several times seen a pulse entirely disappear when the animal was taken from the vertical to the horizontal position. On the other hand, very frequently it was impossible to affect the cardiac action by changing the position of the animal. Nevertheless, the phenomena spoken of occurred too frequently to be a mere outcome of chance, though I several times noted that the heart was usually more affected by alternately elevating and depressing the feet of the animal, than by keeping it in a steadily elevated or horizontal position.

When the circulation has practically ceased, under the depressing influence of an anæsthetic, inverting the body must cause the blood which has naurally collected in the enormonsly relaxed vessels of the abdomen, to flow into the right side of the heart and distend it, and this distention—this increase of pressure—appears at times to have a sufficient momentary influence to stimulate the failing organ.

The theory which has been advocated by some therapeutists, that inversion of the body is of value in the accidents of anæsthesia, because it causes the vital centres of the brain to be supplied with blood, is probably incorrect. The respiration in

FIG. 11.



Tracing showing effect upon the heart of a dog which had been vertical, with his head on level of the table, of bringing him into horizontal position. Feet dropped at X.

anæsthesia fails, not through want of blood in the respiratory centres, but because the blood contains a poison which paralyzes these centres. .

The most remarkable results which I have reached in bringing about the recovery of animals, to all ordinary intents and purposes dead, were obtained through the artificial respiration. Thus, I have seen an animal, in which no respiratory movements whatever had taken place for two minutes, and in which, during that time, no movements of blood had occurred in the carotid artery, and in which, therefore, the heart had ceased to beat, rapidly and permanently restored by artificial respiration.

At one time in these researches, it appeared as though after any dose of chloroform by inhalation the animal could be resuscitated by artifical respiration, even though heart and lungs were completely paralyzed by the drug; but finally I did find a case in which artificial respiration failed.

The results of my experiments with the lower animals may be summed up: that nitrite of amyl,

caffeine, and atropine are of little or no use in chloroform-poisoning; that alcohol, when given in small amounts, has no influence, but that when given largely materially assists in paralyzing the heart and producing fatal results; that ammonia has some little influence upon the heart, but that of all substances tried digitalis is by far the most powerful in stimulating the failing circulation; indeed, my experimental results indicate that it is the only known drug which is of any real practical value in such cases. Next or even before digitalis, strychinine seems to be of value in the accidents of anæsthesia, because, whilst having some influence on the circulation, it powerfully affects the respiration. For many years chloroform has been used in practical medicine as the physiological and practical antagonist to strychnine, and it seems rather odd that strychnine should never have been employed as the practical antagonist to chloroform.

The one measure which in practical value far surpassed all others for the restoration of the dying animal was artificial respiration, and I have no doubt that a great majority of the deaths which have occurred in man from anæsthesia might have been avoided by the use of an active artificial respiration. The difficulty with artificial respiration as it has been hitherto practised upon man, after the Sylvester or other methods, is its inefficiency; whereas the artificial respiration which I used on animals was very active—indeed, much more efficient than natural breathing in causing circulation of air through the lungs, and therefore in removing excess of the anæsthetic from the residual air in the lungs and from the blood.

The use of what may be called "forced" artificial respiration by the physiologist, so naturally suggested a similar practice in man, that the celebrated John Hunter invented for the purpose an apparatus which consisted of a bellows so constructed that when it was extended one compartment drew in air from the lungs, whilst the other drew air from the atmosphere; and when it was closed the process was reversed, the fresh air being thrown into the lungs, the foul air into the atmosphere. In 1867, Richardson, of London, invented an apparatus more elegant and portable, although identical in principle with that of John Hunter's; but I have not found that either Hunter or Richardson treated by forced artificial respiration an actual case of disease or poisoning. In 1875 (*Boston Medical Journal*, vol. xxi.), Dr. John Ellis Blake reported a successful case of aconite-poisoning, in which life was apparently saved, although there was no pulse for over three hours, by artificial respiration, with the use of oxygen. In this case Marshall Hall's method was at first used, but later, a small rubber tube was connected directly with a copper reservoir of condensed oxygen, the other end of the tube terminating in a small nozzle, which was inserted in one nostril. Four hundred gallons of oxygen were thus used, but how far the force of the compressed gas was employed to dilate the lungs is not very clear; and it is somewhat doubtful whether this case should be considered as one of forced respiration. The first physician to use forced respiration in actual human poisoning, with a clear idea of its value and power, so far as my reading goes, was Dr. George E. Fell (*International Medical Congress*, Washington, 1887).

It is plain that the bellows constructed by John Hunter and by Richardson are unnecessarily complex and faulty in principle. There is no need whatever of drawing the air out of the fully filled lungs. Every physiologist knows that when the muscular system is completely paralyzed by woorari or even by death, that the chest-walls have sufficient elasticity to force air out of the lungs, and all ordinary laboratory apparatus for artificial respiration is based upon this fact. For forced artificial respiration in man an ordinary bellows of proper size is all that is required for the motive power.

The real difficulty—the point to be especially investigated and studied—is as to the connection between the bellows and the lungs. Hunter and Richardson simply placed a tube in one nostril, closing firmly the other nostril and the mouth of the subject.

Dr. Fell at first used a tracheal tube, the insertion of which, of course, necessitated the performance of tracheotomy. In one case, however, a simple mask covering the mouth and nostrils was a perfect success. I have had no opportunity of trying the apparatus on the living, but have made a series of experiments upon dead bodies, which which have demonstrated that usually a face mask is all that is necessary for the performance of artificial respiration. Before using the mask the tongue should be well drawn forward, and, if necessary, fixed in this position by an ordinary piece of suture silk run through it, which can be held in the hand of the operator. If in any individual case the mask fails, an intubation tube may be introduced into the larynx. I do not believe that it is ever necessary to perform tracheotomy.

Dr. Fell's apparatus consists of a pair of foot-bellows by which air is forced into a receiving chamber, which is connected with an apparatus for warming the air, and a valve which can be opened and shut by a movement of the finger. This valve in turn leads to the tracheal tube. When the valve is opened the air rushes through the chamber into the lungs and expands them; the finger is lifted, the valve shuts, the lungs contract; and so the respiration goes on. I have no doubt that this apparatus is very efficient in practice, but it is open to the serious objection of being unnecessarily complex and costly.

A much simpler, cheaper, and probably equally efficient apparatus may consist simply of a pair of bellows of proper size, a few feet of India-rubber tubing, a face mask, and two sizes of intubation tubes; there should also be set in the tubing a double tube, with an opening similar to that commonly found in the tracheal canula of the physiological laboratory, so that it is in the power of the operator to allow for the escape of any excess of air thrown by the bellows. I suppose this whole apparatus could be prepared at the expense of less than five dollars, and it seems hardly necessary to point out the probable value of this simple apparatus in various narcotic poisonings, and other accidents in which death is produced by a paralysis of the respiratory centres, of temporary nature. The proper use of it could be taught to persons without special medical skill, so that it not only ought to form a part of the surgeon's outfit, but might be of great service in life-saving stations, about gas-works, etc.

In conclusion, I may be allowed to state, that if the results and deductions arrived at in this address are, as I believe, correct, the rules for the proper treatment of accidents during anæsthesia can be summed up in a very few words :

Avoid the use of all drugs except digitalis and ammonia.

Give the tincture of digitalis hypodermically.

Draw out the tongue, and raise up the angle of the jaw, and see that the respiration is not mechanically impeded.

Invert the patient briefly and temporarily.

Use forced artificial respiration promptly, and in protracted cases employ external warmth and stimulation of the surface by the dry electric brush, etc., and above all remember that some at least, and probably many of the deaths which have been set down as due to chloroform and ether, have been produced by the alcohol which was given for the relief of the patient.—*Med. News.*

THE PROGNOSIS OF LATERAL CURVATURE IN YOUNG GIRLS.

At the request of the Secretary of the Society, a gentleman who is competent to decide on the merits of papers presented to this body, I have made an attempt this evening to discourse upon the above title. I am sure that the practititioner of medicine is always already to express his views upon the prognosis of lateral curvature. The impression prevails that the deformity is progressive, that a slight curve ends in a hunchback, and that something mechanical must be applied in order to prevent this result. At the outset, then, let me state my conviction that one seldom has an opportunity of observing the evolution of a lateral curvature of the spine. Somehow or other the apparatus we employ or the treatment we suggest succeeds (so to speak) in arresting the deformity. For ten or twelve years, while interne at the Hospital for the Ruptured and Crippled, and while in charge, also, of the Out-patient Department, I had an opportunity of following a large number of cases of laternal curvature in young girls, and the routine treatment was this: Applied a Knight brace, which was made to fit the body as nearly as possible, made of steel, with bands half-encircling the body (the posterior half) from axilla to axilla, from ilio-costal space to ilio-costal space, from trochanter to trochanter, and the terminal ends of these bands, connected by uprights, passing from the axilla down to the trochanter. One or two bars were placed in the middle half, either side of the vertical bearing of the spine, a leather or steel plate passed from one of the posterior bars to the lateral bar, the object of which was to make pressure against the projecting ribs, and this steel framework, properly upholstered, was held in place by canvas fronts. Shoulder-straps were employed to complete the appliance and we had thus a steel and canvas encasement, which the patient wore by day, removed by night, and reported from time to time, in order to see that a reasonable fit had been secured. In addition to the mechanical appliance thus employed, each patient was instructed to exercise on parallel bars five or ten minutes twice a day, with or without apparatus. The parallel bar exercise consists in suspending themselves by the arms and hands, allowing the weight of the pelvis and limbs to make a certain amount of traction on the column. No other exercises were employed.

Simple as this treatment was, and crude as it seemed to many to be, I was enabled, at the end of eleven years' residence in the hospital, to express my opinion that I had never seen a complete evolution of lateral curvature of the spine. That is to say : I had not seen a case in the early stage, where osseous changes were absent, proceed to the development of a marked rotary lateral curve, with prominence of one shoulder, enlarged letter S deformity, shortening of stature, and an overlapping of the ilium by the free ribs.

It is true, during this period, while the plaster of-Paris jacket was so popular, that I read and heard of the cases wherein the treatement I have just recorded had been employed, and where the patient stated that the deformity had increased perceptibly, to be relieved only by the plaster-of-Paris jacket. Lectures were held upon our cases. These lectures were reported in the journals, and occasionally some old patient, who had been treated right royally at the hospital, would return to show what a wonderful change had been affected by this new treatment.

In 1884, relieved from hospital duty, I became

quite enthusiastic in the plastic treatment of this deformity. I secured by reason of my long personal acquaintance with many dispensary patients, a large contingent at my clinic. I familiarized myself with the details of the jacket, studied it as I would an art, and after a year or two acquired a fair degree of skill in its application. I treated not only my clinic, but my private patients with the plaster-of-Paris corset, and combined with this treatment certain exercises said to emanate from Mr. Bernard Roth, of London. After three years of this kind of practice I was enabled to state that I had seen the evolution of a rotary lateral curvature. So that, in 1887, during the summer, my enthusiasm had suffered such a shock that I decided to abandon the plaster-of-Paris corset as a mode of treatment. During this time however, I had employed occasionally certain other forms of steel appliances with equally unsatisfactory results. Visiting Mr. Roth, of London, I gathered from him the opinion that medical gymnastics were all that is necessary to prevent deformity, and, in many instances, to correct. This gentleman asserted quite positively that the combination of steel and plastic appliances with gymnastics, employed once or twice in the twenty-four hours, the object of which was to develop muscles, were counteracted most efficiently by steel or plastic appliances during the rest of the time.

In the fall of 1887 I began the treatment by medical gymnastics, as I had learned it from Mr. Roth, and I am happy to say that the majority of my cases have done well. I do not mean to state that many have been cured, but I do mean to state that in rare instances only has the deformity increased, or have the parents and patients been dissatisfied with the result.

During this period of eighteen or nineteen years, I have seen a large number of patients who presented a slight degree of deformity, wherein no appreciable increase has taken place even without treatment. In many instances I have recommended an out-of-door life, horse-back riding, rowing, and deportment to patients who lived in the country, and I have learned from the family physicians, years afterward, that the deformity had become scarcely appreciable, and that the cases had given them no more anxiety. I have become therefour, an advocate for an out-of-door life in young girls who were crowded at school, who keep to long hours in any capacity, and who have acquired a slovenly position in standing or sitting.

With the Swedish-movement cure I have had no extended experience. For the past three or fore months, however, a gentleman, Mr. Lindhe, recommended to me very highly by Dr. Purdy, of this city, has taken charge of my charity cases at the hospital out-patient department, and has labored daily with a class numbering about thirty. The movements differ somewhat from those of Mr. Roth, in that more force is employed This gentleman has consented to bring a number of my patients here this evening and show you his method. The testimony of the parents and girls themselves is that they have improved. The gentlemen present will agree with me that the only way to predictate any results would be to examine carefully with a scoliosometer, and repeat the examinations months or years afterward. The difficulties attending a careful measurement are so great that I have come to rely upon a few salient points in the way of record, and upon the eye in determining the amount of improvement or the reverse. My results, then, are measured in this way.

The foregoing remarks are necessary, I think, to a proper study of the subject in hand, namely—The Prognosis of Lateral Curvature in Young Girls. The family physician is, or ought to be, consulted quite early any kind of deformity. The deformity now under consideration is usually first observed by the dressmaker. The attention of the parents is called to inequality of the two sides. One shoulder-blade projects a little more than the other; one hip may be higher than the other, and the dress skirt on one side must be a little longer. There is, in a word, a lack of symmetry.

The different methods of treatment discussed are sufficient to encourage the practihoner in the management of his cases. It is sufficient, thus, to be forewarned.

The average physican can recognize an early case of lateral curvature, provided he take the trouble to examine. The following method, I think, will enable anyone to discover a curve, however slight. Let the patient be stripped down to the hips, not the waist-band, but down to the hips; let the skirts be fastened around the pelvis just above the trochanters major; have the shoes removed, let the patient stand in stocking-feet; then let a good light be brought to bear upon the back. Any lack of symmetry can be easily recognized One wants to note the position of the scapulæ, whether one is on a higher plane than the other, whether one is farther removed from the spinous processes or the vertical bearing than the other, whether one projects farther backward than the other. Examine the tips of the shoulders to note whether one shoulder is higher than the other. Compare the ilio-costal spaces, note whether one is deeper, or whether the curve is longer than the other. Finally, the deviation of the spinal column itself, the locality where the deviation occurs, and the projection of the ribs on one or the other side should be noted. A front view can be had, which will enable one to determine any rachitic changes in the sternum or any inequality of the mammæ. In lateral curvature it must be remembered that one mamma is larger than the other, and the larger mamma corresponds to the side on which

the concavity of the curve is found. Let the patient now bend forward as far as possible at the hips without bending the knees, and aim to touch the floor with the fingers. This will show the inequality of the chest-walls, will show how much more prominent the ribs are on one side than on the other. One can also note the prominence or the reverse of the spinous processes, and can thus determine quite easily that part of the column where the rotation is greatest. No examination can be complete, however, without measuring the length of the limbs, not only with the tape-measure, but also in an upright position, by placing books of various thicknesses under each foot, and noting how much thickness is requisite to equalize the pelvis and to reduce the actual deviation to the minimum. Dr. Morton, of Philadelphia, has a very ingenious contrivance for this, but it is practically the same as the method just mentioned, namely—books of various thicknesses.

With the observations completed, a prognosis can be readily given. I, of course, do not mean to say that the prognosis can be given independent of any treatment employed, but what I mean is this: The physician who has made the examination just described, will adopt some method of treatment that will, as a rule, result favorably. The difficulty is not in one's ignorance of what to adopt, but in the lack of interest manifested by the parents or the patient. Again, physicians are so uncertain about the different forms of apparatus that they give their opinion in an uncertain sort of way, and it is not regarded as of much value. The prominence given to athletic sports in general now, for both sexes, I think will enable us to give a better prognosis in our cases. Whatever course of exercises is decided upon, it must be carried out thoroughly. A daily drill is requisite. It is not sufficient to say to the patient, "Go home and exercise," or "Take this and take that." It is important to show the patient how to exercise. If a brace is to be employed, it should be made to fit the patient, and should not be worn at night. If I find a cardiac murmur, I do not prescribe a course of exercises, unless I can direct them myself and know the influence on the organ itself. Such patients I prefer to encase in a steel apparatus.

This deformity, like many diseases, is self-limited. A little twist is developed in the back, one shoulder projects a little more than the other, and a curvature results. The curvature is so slight that it is not recognized, and the patient grows to womanhood without ever knowing that she has a curve. Such instances do occur. They are not frequent, only it is important to know that all curves do not go on to great deformity. In my opinion the greatly deformed cases are the exception. Considering the number of girls who have one hip higher than the other, or one shoulder more prominent, it is astonishing that we do not have more exaggerated deformities with our present ideas of the progress of such cases. It simply means that a great deal too much stress can be laid upon a slight deformity, while repeated observations will enable one to determine whether it really is increasing or not. If such a patient had been advised to take better care of the health, to cultivate a better deportment, to take every opportunity for improvement of the muscular system, one can reasonably give a good prognosis.

To conclude, then, we see that The prognosis of lateral curvature in young girls depends a great deal upon the early recognition of the deformity. It will also depend upon the thoroughness of the treatment employed. If an apparatus is used, it must be made so as to meet the indications and must be worn for a long time, from two to five years. If gymnastics are prescribed, the patient must be taught the different movements, must be drilled in the same after a good knowledge is acquired, and the exercises should be continued at home for a year or two. If it is found that the deformity is very slight and the patient can lead an out-door life, and is not crowded too much at school, a good prognosis can be expected if only the ordinary rules governing general health are observed. In the more advanced cases it is not possible to correct the deformity to any great extent. Indeed, it may safely be assumed now that no form of treatment yet adopted is equal to the correction of an osseous deformity. All that we can hope is a better position in standing or sitting, a better carriage, a filling out of the chest more symmetrically, and an ability on the part of the patient to hide the deformity.—Dr. Gibney in *Med. Rec.*

THE TREATMENT OF GENU VALGUM AND OTHER DEFORMITIES BY MEANS OF THE SCREW CLAMP.

Having frequently experienced difficulty in remedying deformities of children suffering from knock-knee and bow-legs by means of the usual methods, and being unwilling to resort to the operation of osteotomy, it occurred to me that it might be possible, by rapidly breaking the bone at the wished-for spot, to rectify the deformity. I concluded that if the bone could be broken without injury to the epiphysis, I should have to deal with a simple fracture which would run its course without complication, and that little harm could result to the soft parts from the pressure, provided it was not of long duration, care being taken not to press on any important vessel or nerve. For this purpose, after many experiments, I had a clamp manufactured. It consists of two curved arms, which can be approximated or separated as may

be wished. These are covered with thick India-rubber, and are connected by means of a strong pivot. Attached to this pivot is the screw, into one end of which is fitted the appliance for making pressure, the other end terminating in a strong handle. This arrangement of the arms and of the screw, connected by a pivot, admits of pressure being applied at any point, and counter pressure at any two points that may be desired. Underneath this pivot is a nut, by means of which the arms and the pivot can be firmly screwed together.

In operating on a femur for genu valgum, in order to break it, a wedge-shaped appliance with rounded edge of polished steel is fitted to the screw. One curved arm of the clamp is placed on the outside of the femur just above the epiphysis, the other arm four or five inches higher up the limb. The screw with the wedge is applied two or two and a-half inches above the condyle, on the inner side of the bone. Having decided upon the exact position of the points of pressure, the clamp is removed from the limb, and must be firmly screwed together by means of the nut which is on the under side of the clamp. A wrench for the purpose is supplied by the makers. The clamp having been reapplied in the desired position, which has been previously marked on the limb, must be carefully held there by an assistant; the screw must be quickly and forcibly turned, compressing the wedge in on the bone, and generally in about twenty or thirty seconds it will be heard to break at the point of pressure. For bow-legs I use a flat appliance, which is covered with felt or India-rubber. The clamp having been applied to the limb, the bones are forcibly pressed into the wished-for position.

In the cases I have operated on, I was surprised at the very small amount of injury inflicted on the skin. After the third day, with one exception where the skin got entangled, but slight ecchymosis remained at the points of pressure. All my cases ran the ordinary course of simple fracture. I do not pretend to recommend the indiscriminate adoption of this method of cure for genu valgum. When the patient's age exceeds twelve years, the great amount of pressure required to break the bone becomes a matter for serious consideration.

At first I found it extremely difficult to cut across the bones of very young children, owing to their bending. This difficulty has been overcome by approximating the arms of the clamp. The clamp has proved successful with a girl, aged 14 years and 11 months, and also with one 17 years of age.

From all I can see, I believe this operation for genu valgum, in trained hands, will obviate the necessity for osteotomy in many cases. An experienced assistant who has learned to work with the operator is also very necessary. The following is the history of some of the patients upon whom I have already operated:—

M. L., aged 3 years, admitted November 16th, 1887, an ill-nourished child. Both legs were badly bowed at lower third; the outer ankles touched the ground when she attempted to walk. December 3rd. Fractured left tibia and fibula with a screw clamp, using felt pads at the points of pressure; put up the limb quite straight in a pasteboard splint, having enveloped it in Gamgee tissue. January 31st, 1888. Left leg rapidly recovered as an ordinary simple fracture; now quite straight. Fractured right tibia and fibula to-day, using the same clamp, and having straightened the limb, put it up in the same manner as the left leg. April 6th. Right leg quite united and straight. Patient dressed and up; stood with the assistance of a chair. September 22nd. Had been in the country for five months, was much improved in health; limbs quite straight; could walk holding on to the nurse's hand.

J. K., aged 3½ years, admitted June 5th, 1888, suffering from bow-legs. He was a patient of Dr. Ashley Cummins, who kindly asked me to operate. June 6th. I fractured in the lower third, and straightened the right leg, which was treated in the same manner as my first case. 20th. Fractured and straightened left leg. July 26th. These fractures having united without any trouble, the patient was discharged cured to-day.

M. S., aged 11 years and two months, always suffered from double genu valgum, of such severity that she could at no time walk more than 200 yards without assistance; she had previously undergone a variety of treatment, and my colleague, Dr. Ashley Cummins, having decided to perform osteotomy, consulted me with regard to the matter. On expressing to him a wish that I should be allowed to try if it would be possible to fracture her thigh with the screw clamp, he kindly handed her over to me for treatment. On July 25th, 1888, I operated in the manner described, using a timber wedge covered with felt to fracture her left femur. The bone was broken 2½ inches above the joint. There was no difficulty in the operation. The arms of the clamp were separated 4½ inches; the time of pressure about 25 seconds. There was no skin wound. The limb having been enveloped in Gamgee tissue a long splint was applied. 29th. Examined her thigh to day. There was only slight ecchymosis at the points of pressure. She had no pain; temperature normal. September 13th. Her limb was quite straight and firm; she was able to stand with slight assistance to have her photograph taken. 14th. Fractured her right femur to-day, using a steel wedge, which was covered with India-rubber. There was no skin wound. Put her up as before in Gamgee tissue and a long splint. 23rd. Limb quite straight, doing well; temperature normal. 29th. Limb put up in a plaster bandage. October 26th. Doing well. Limb quite straight.

H. W., aged 3½ years; double knock-knee. May

22nd, 1889. Made three attemps to fracture his right femur, but failed, owing to the elasticity of the bone; the arms of the clamp were separated from 3½ to 4 inches. May 25th. Fractured his left femur in the first attempt; arms of the clamp separated 3½ inches; applied a curved long splint. June 22nd. Bone united. June 30th. Fractured his right femur 2 inches above the joint in the second attempt; arms of clamp separated 3½ inches. July 4th. Bruises have quite disappeared. Aug. 1st. Bones firmly united, and on August 30th the little fellow was walking about; he has been cured with a slight outbow; result is extremely satisfactory.

J. C., aged 13 years 14 days; knock-knee, right extremity. June 18, 1889. Succeeded in fracturing her right femur on the fifth attempt; arms of clamp open to 4½ inches; there was but one very slight abrasion; applied a curved long splint. June 19th. No pain or uneasiness. June 27th; Opened the bandages; skin abrasion quite healed. limb in good position. August 1st. Bone firmly united; deformity completely cured.

E. B., aged 1½ year; angular deformity of left radius and ulna, of which no satisfactory history could be given. September 9th, 1889. Fractured radius and ulna quite close to the wrist-joint, using the steel wedge; arms of clamp open to 2 inches; straightened the limb and put it up in side splints. October 10th. Bones united; limb quite straight; discharged cured.

J. R., aged 2½ years; both legs badly curved in the middle third. March 9th, 1890. Under chloroform, the arms of the clamp being open 2½ inches, fractured his left tibia and fibula. Having straightened the limb, applied side splints as usual. The clamp was then applied to his right leg, and it was treated in the same manner as the left. March 12th. Doing well.

E. J., aged 6 years; double knock-knee and anterior curvature of both legs. January 16th, 1890. Under chloroform, fractured her left femur in first attempt, arms of the clamp open to 4½ inches. Put her thigh up in a curved long splint in the usual manner. The clamp, with arms open to 4 inches, was applied to her right leg, the bones were broken in the lower third, the limb straightened and an iron back splint applied. January 16th, 10.30 p.m. On account of pain opened and examined her leg; at the points of pressure, where the clamp was applied, there is nothing to be seen but a slight redness. Reapplied the splint. February 21st. The broken limbs have united without trouble, February 22nd. Under ether treated the right femur in the same manner as the left; also rectified the deformity of her left leg. February 28th. Child doing well; no pain since operation. March 26th. Fractured right leg, upper and middle third tibia and fibula, making in all five fracture operations. June 1st. Walking about about quite cured.

To my colleague, Dr. Ashley Cummings, I am indebted for his valuable assistance, and for affording me an opportunity of operating on some of his patients.

The screw clamp and appliances are manufactured by Messrs. Arnold and Sons, West Smithfield.—Nicholas Grattan, F.R.C.S., in *Hosp. Gaz.*

CHLORALAMID.

Chloralamid is properly a chloral formamid or formidate of chloral with the formula $CCL_3CH\begin{cases} OH \\ NHCHO. \end{cases}$

It is chemically a union of chloral anhydride (CCl_3CHO) with formamide ($CHO.NH_2$).

Prof. J. Von Mering was its discoverer and E. Schering, of Berlin, its exclusive manufacturer. It occurs in the form of colorless, very faintly but not unpleasantly bitter, non caustic, odorless crystals, melting at 239° F. and soluble in from nine to fourteen parts of cold and less of warm water, in one part of absolute and one and a half parts of ninety-six per cent. alcohol. To understand its time of action it is well to remember that it requires five hours to dissolve twenty grains in two ounces of water, and only fifteen minutes when the memstruum is one dram of rectified spirit. No precipitation occurs on adding the alcoholic solution to water.

TESTS.

Upon heating chloralamid to its melting point, 239° F., chloral is liberated and may be tested separately. Heated with a solution of potassa it emits odors of chloroform and ammonia. A few grains in a solution of four drops of ninety per cent. carbolic acid in one-half ounce of strong sulphuric acid gradually heated to boiling gives rise to a bright-red color and a strong odor of chlorine. With the same test phenacetin produces a dark purplish-brown mixture with a strong acetous odor and sulphonal, a bright-green, changing to dark green upon the further addition of strong sulphurous acid. Fehling's and Pavy's solutions are not affected by chloralamid.

INCOMPATIBLES.

The drug is rapidly decomposed by water heated above 140° F. and by caustic alkalies, and slowly by alkaline carbonates.

ADMINISTRATION.

The dose varies from fifteen to sixty grains, while the majority of experiments rely upon a single dose of thirty grains and rarely find forty-five grains necessary. A few consider this last dose as the limit of safety. A child of eleven years of age was given seven grains, and another

four and a half years old, five and ten grains. In any case it is better, especially with new drugs, to commence with the smallest dose and increase cautiously. To secure the best results the drug should be administered from one to one and one half hours before bed-time. It may be prescribed in powders alone or triturated with oleosaccharа fœniculi, capsules, wafers or dissolved in wine or brandy, to which water may be added as desired. Some difficulty will be experienced in taking the powder in water, tea or milk, as advised by a few, on account of its slow solution and tendency to adhere to the sides of the vessel. It is better to wash down the powder with a draught of milk, weak tea or water. An advised prescription is:

℞.—Chloralamid . . . . . gr. xiv.
Acidi Hydrochlorici Diluti. gtt. vi.
Syrupi Rubi Idæi. . . . ʒ ii.
Aquæ q. s. ad. . . . . ʒ ii.
Sig.—To be taken in one or two doses.

As an enema, in which form it is unirritating and slow in action, we may use:

℞.—Chloralamid . . . . . gr. xlv.
Acidi Hydrochlorici Diluti gtt. iii.
Alcohol . . . . . ♏ xx.
Aquæ . . . . . ʒ iii.

So administered it is considered by a few to be most reliable in its action.

However used it must be remembered that its solution is not to be heated.

PHYSIOLOGICAL ACTION.

Locally, chloralamid has been found to be absolutely free from irritation, and even where a ten per cent. solution has been applied to the delicate conjunctiva. Internally, no effect has yet been discovered upon digestion and circulation, except in relation to the vaso motor centre. Here we have a trivial difference in opinion. A single authority (Langgaard)—a possible pessimist, for he also makes the same statement regarding the respiratory centre—affirms that blood pressure is lowered through depression of the vaso motor apparatus. Reichmann admits that this is slightly so, but Von Mering, Zuntz, Prof. Leech of Guy's Hospital, Geo. P. Cope of Dublin and many others deny this action, while Rabow, of Lausanne, goes still further and states that the formamide, liberated from the chloral, stimulates the vaso motor centre in the medulla and raises blood pressure.

Chloralamid has the property of inducing an apparently natural sleep, commencing in from one-half to three hours and lasting from six to ten hours. The usual interval between the administration of the dose and the advent of sleep is from one to two hours, but this depends so greatly upon the slow solubility of the drug in the watery fluids of the stomach, that it is possible that absorption may not be completed or sleep commence until the morning after the evening dose. This delay might be obviated by employing an alcoholic solution. In some cases the sleep is interrupted and even many failures are reported. However, all this depends upon the dose administered, forty-five grains, equalling thirty grains of chloral hydrate, being considered necessary to insure certainty. The frequency of the failures may be estimated from the fact that Dr. Cope reports only four per cent., Dr Williams six and one-half per cent. of all cases, and Prof. Leech no failures in nineteen patients. Some consider the sleep to be deeper than that obtained with chloral.

To what this hypnotic action is to be attributed is, as yet, only a matter of conjecture. Dr. Eugen Kny supposes that, in the alkaline blood, chloral is gradually liberated, and he partially bases this opinion upon the presence of uro-chloralic acid in the urine. It would seem, however, that more depression would have been discovered if such were the case. The only depression positively established was that of reflex action in frogs after injecting one-third to one-half of a grain.

INCIDENTAL EFFECTS.

While no unpleasant after-effects were noticed by many authorities, no disturbance of the heart, respiration, temperature, kidneys, digestion, or appetite (but rather improvement of appetite, according to Dr. D. R. Paterson), a few have occasionally found slight head-ache upon awakening, alone or with lassitude and a desire to sleep during the next morning or entire day. Among the other unusual effects are thus arranged in order, commencing with those most frequently reported: slight or severe vertigo, thirst, nausea, dryness of the mouth, loss of appetite, slight delirium, vomiting, cardiac weakness, rapid and feeble pulse and restlessness which necessitated forcible restraint. The more severe symptoms appeared after large doses, over thirty grains, and were not consecutive or persistent as is the case with sulphonal. Patients do not seem to become accustomed to its use, nor is there evidence that the drug is cumulative in action.

One hour after a dose of sixty grains, there have, in two instances, appeared vertigo, intoxication, volubility, inco-ordination, occipital head-ache, nausea and either no change or slight increase in the pulse rate. These symptoms were at their height in about three hours after the dose, while slight vertigo and cephalalgia persisted during the second day.

These incidental effects seem to be very rarely exhibited, even after the largest therapeutic dose, and are proportionally not more frequent than with chloral or morphine.

THERAPEUTICS.

Chloralamid is successfully employed in con-

quering insomnia, and particularly that form denominated simple or idiopathic insomnia, not due to excitement or severe pain. It is, furthermore, possible for the wakeful patient to enjoy several nights of natural sleep after a single dose. The best results occur when the drug is used in insomnia due to nervousness, neurasthenia, hysteria, "spinal disease" or old age; next best when the causes are chronic alcoholism, alcohol excess, cardiac and bronchial asthma, pleuritis, phthisis, pericarditis, arterial sclerosis, organic heart disease, typhoid fever, gastritis, subacute nephritis, ascites, diabetes mellitus and in the morphine habit. It is less effective when wakefulness is due to tabes dorsalis, neuralgia, progressive paralysis, the excitement of insanity, cerebral softening with delirium, melancholia, chronic mania and acute mania. In these conditions, doses of from thirty to sixty grains are required, providing such doses are tolerated.

The drug is useless when the insomnia results from paralytic dementia, maniacal excitement or hallucinations, severe neuralgia or other pain, violent cough, distressing headache, delirium of cerebral apoplexy and from delirium tremens.

Even pain, when not acute, is often relieved, and the large doses necessiated are, by many patients, preferred to morphine. Chloralamid, in doses of from twenty to sixty grains, has checked the pains of thoracic aneurism, carcinoma of the stomach and liver, sarcoma of a rib, erysipelas, rheumatic fever, floating kidney, neuralgia, gallstone, varicose ulcer and alcoholic neuris.

In chorea, a boy of eleven years of age was cured in five days by fifteen grains of the drug three times daily, and in like manner, a girl, after receiving no benefit from other forms of treatment, was afforded relief in eight days.

When administered in phthisis it was found that the troublesome night sweats disappeared.—Chas. H. Steele, A.M., M.D., in *Pacific Med. Jour.*

Circumcision.—In the *Archives of Surgery* Mr. Jonathan Hutchinson sums up his experience in regard to the sanitary advantages of the rite of circumcision. After premising that it is not needful to go on a search for any recondite motive for the origin of the practice, he says: "No one who has seen the superior cleanliness of a Hebrew penis can have avoided a very strong impression in favor of the removal of the foreskin. If not removed it constitutes a harbor for filth, and is, in many persons, a constant source of irritation. It conduces to masturbation and adds to the difficulties of sexual continence. It increases the risk of syphilis in early life and of cancer in the aged. I have never seen cancer of the penis in a Jew, and chancres are rare."—*N. Y. Med. Jour.*

The Prognosis of Infantile Paralysis.—An opinion respecting the duration of the paralysis or permanent condition in anterior polio-myelitis cannot be given until the end of the first week or ten days, and then *only* by means of an *electrical examination.* Whatever muscles, at the end of that time, have lost faradac irritability, will certainly waste and remain for a long time paralyzed. On the other hand, if there is no loss of irritability at the end of the ten days, but it is apparent at the end of a fortnight or three weeks, the wasting will be slighter in degree, and considerable ultimate recovery may be confidently looked for even in the most affected part. Where there is no loss of irritability, the paralysis will pass away in the course of a few weeks, or at most, of a few months. Where irritability is lost tardily, there will be wasting and paralysis for several months. Where irritability is lost early, the wasting will be rapid and great, the paralysis will last for one or several years, and it is unlikely that perfect recovery will take place.

In the chronic stage the prospect of ultimate recovery depends on the rate which the wasting develops, on the *electrical reaction*, and on the duration of the case. Where the wasting is great and has been rapid, and the faradic irritability is entirely absent, although some recovery may occur, it is not likely to be complete, and if this condition exists a year after the onset it is improbable that more than very slight improvement will occur. On the other hand, if, at the end of one or two months, some faradic irritability can still be detected, although low in degree (*i. e.*, elicited only by a strong current), considerable improvement is probable, and actual recovery is possible at the and of six or eight months.—W. R. Gowers, in *Pacific Med. Jour.*

The Microbes of Pneumonia.—"Dr. Queisner has examined the lungs of a number of children and adults dying from pneumonia, his results showing that the pneumonia coccus of Frankel and Weichselbaum is the usual bacterial cause of true croupus pneumonia. This coccus was also found in the majority of cases of broncho-pneumonia. In both children and grown-up people the sputum contained the coccus at the very commencement of the lung affection, and its existence appeared to form a very good sign of the invasion of pneumonia of one kind or another. In the lungs of ten children who had died of various forms of pneumonia, primary as well as secondary to measles, diphtheria, and tuberculosis, Friedlander's pneumonia bacillus was not once found, but the coccus was found in eight cases. In several instances it was impossible to distinguish between the catarrhal and the croupous form, as even in undoubted catarrhal cases a very perceptible quantity of fibrinous exudation was found."—*Lancet.*

TUBERCULOSIS, SCROFULA AND LUPUS.—Dr. Lingard has made some important experiments for the medical department of the Local Government Board, as to the relationship of tuberculosis, scrofula and lupus. Koch, as is well known, has stated that the bacillus tuberculosis is present in all three, but the incontestable clinical differences seemed to many to detract from the value of his observations. Dr. Lingard has, as it seems to me, pretty conclusively proved that the clinical diversity is due, in part at least, to a difference in the virulence of the bacillus. Arloing had advanced evidence in this direction some years ago, but his results were controverted. Dr. Lingard finds in guinea pigs, that subcutaneous inoculation of tuberculosis material leads to the death of the animal from general tuberculosis in about 80 days; inoculation, with scrofulous material, has the same result in about 200 days, and with lupus material in 330 days. Further, he has found that animals inoculated in series, die at progressively shorter intervals. Taking all his experiments together, he obtained the following averages: Guinea pigs A, inoculated with scrofulous material (caseous glands or cold abscess), died of general tuberculosis in 206.3 days; guinea pigs B, inoculated from A's, died of general tuberculous in 131 days; guinea pigs C, inoculated from B's, died of general tuberculosis in 79.5 days, and guinea pigs D, inoculated from C's, died of general tuberculosis in 60.1 days. A considerable agitation is on foot at present with regard to the propriety of permitting the sale of the flesh of animals affected with tuberculosis in any form. The question of compensation to breeders and butchers constitutes the main difficulty, and there is considerable difference of opinion among sanitary experts; the more thorough-going maintain that tubercle anywhere ought to lead to the condemnation of the whole carcass, while others hold that a slight amount of tubercle, affecting only the lungs, pleura, or other viscera, ought not to prevent the flesh being passed. Except to the eaters of very underdone beef, the matter is not one of first-rate importance; but it is altogether different with regard to milk, and it is probable that power will be obtained by sanitary boards to forbid the sale of milk from cows suffering from tuberculosis in any form, but especially, and above all, from mammitis.—*Correspondent Occidental Medical Times.*

GLANDULAR TUMORS OF THE NECK.—Dr. J. W. White (*Therapeutic Gazette*) says:

1. Lymphatic enlargements, situated in the neck and dependant on constitutional causes, may arise from syphilis, carcinomia, and lymphadenoma.

When from *syphilis*, they affect by preference the posterior chain of glands, are small, freely movable, painless, bilateral, and yield readily to specific treatment.

If *carcinomatous*, they form a very hard, rapidly-growing mass, infiltrating surrounding parts, becoming fixed to every thing beneath it, involving the skin, causing serious pressure symptoms, and followed by the development of cachexia. Operative treatment is useful, though only palliative.

If *lymphadenomatous*, they are rounded, regular, movable, painless, elastic or fluctuating, do not affect the skin, and are associated with anæmia, leucocythæmia, and with enlargement of other and widely removed lympathatics and of the spleen. The treatment should be tonic and supporting. Operative interference is useless.

2. *Scrofulous adenitis* is essentially a tubercular inflammation of glands, occurring usually in young persons with a scrofulous or phthisical-family history, and with some form of local irritation superadded, which must be sought for in the mouth or pharynx or about the face or head. The glands are all characterized by a tendency to caseation, with or without suppuration, and from indolent masses, less defined, more fixed, and more tender than in lymphadenoma. The treatment in recent cases should be first hygienic and tonic with fixation of the head, and, if possible, with cure of the proximate cause. If this fails, or without attempting it in old cases, excision should be resorted to.

3. *Simple adenitis* results from some source of local irritation, and constitutes an acute, tender, inflamed, poorly defined swelling, running a rapid course to either suppuration or resolution. Treatment should consist in removal of the cause and in the application of resolvent lotions or ointments, or, later, in the free evacuation of pus.—*Am. Lancet.*

PARACENTESIS IN INTERNAL HYDROCEPHALUS.—The author exhibited a case of acquired chronic internal hydrocephalus, for the relief of which he undertook paracentesis after trephining. The patient was a boy nearly five years old. He was seized with convulsions when three months old, and these attacks, which became very frequent, continued for nine months and then ceased. Three months after their commencement his head became enlarged. Every form of treatment had been tried, but without the least success.

Condition at the time of operation as follows: He was obviously imbecile; he could not talk, but smiled idiotically; he was totally blind; the other special senses were not apparently affected. He had never walked or stood alone, but could easily move his body and extremities. His bowel and bladder sphincters were not controlled. He was extremely irritable and restless. He was fairly developed physically, but always of an ashy pallor. There was a very frequent rotary movement of the head, with slight retraction and grinding of the teeth.

The anterior fontanelle closed when he was eighteen months old, and the sutures had ossified at the usual time. The measurements of the head gave twelve and one-half inches from the glabella to inion; thirteen and three-quarters inches over the biauricular line; twenty inches around the fronto-occipital line. On the 4th of December, 1888, the author operated upon the case. Under the most careful antiseptic precautions, with a trephine about one centimetre in diameter, a button of bone was removed from over the coronal suture, about one and one-half inches to the right of the median line. A very delicate trocar was passed through the dural membrane into the brain-substance, downward, backward, and inward, to the depth of one and one-half inches, the object being to pierce the central cavity of the right lateral ventricle. About an ounce of a clear limpid fluid, closely resembling cerebrospinal fluid, was evacuated, and, as the trocar was withdrawn, a small quantity of the same kind of fluid escaped from the subdural space. For several days the same fluid continued to ooze from the puncture in the dura, and it was estimated that from four to eight ounces was thus discharged.

The case progressed satisfactorily. In two or three days he could stand alone, and he was gradually able to walk alone across the room, which he did in about three weeks. There was a partial restoration of sight. He became more attentive and seemed to understand better. He was less irritable and he slept well. The rotary movements of the head ceased. However, there was no development of speech, nor were the sphincters under any better control. The author believes that more fluid will have to be evacuated, as the patient is not quite so active now as some time after the tapping.

The chief difficulty lies in our inability to determine which cavity to evacuate. For instance, if the fluid resides in both cavities, and the normal openings between them, through the foramen of Majendie, and those behind the roots of the glossopharyngeal nerves be closed by inflammatory exudation, or the presence of a tumor, then to tap only the subdural space would remove the external pressure, and allow such an expansion of the internal fluid as would perhaps lacerate the brain-tissue. Or the same effect might be produced by evacuating only the ventricular fluid. This may have been the cause of death in some of the reported cases.—Dr. Ayers in *Am. Lancet.*

Cystitis. — One of the commonest ailments among women which the general practitioner is called upon to treat, and which seems to be peculiarly prevalent in this class of patients, is a troublesome cystitis, due possibly to derangements of the pelvic circulation. Not rarely a very considerable amount of difficulty is experienced in overcoming the affection, which not only disturbs the rest of the sufferer, but often also very seriously affects her mental state, causing her to be irritable, nervous, and a source of discomfort to all around her. For the treatment of such cases, resort has been had to innumerable remedies, and success has been claimed in this connection for the most dissimilar drugs and methods. Most frequently the cause of the distress is a vesical catarrh, the cure of which affords more or less complete relief of the condition. At other times the treatment which is found to be called for is constitutional rather than local; and cases are also met with that necessitate a union of both procedures. To this probably it is attributable that the recommendations of different practitioners cover so wide a range of ground; while it explains, too, the reputed success of those who claim to have met with good results from the employment of medicines newly introduced into the Pharmacopœia. The drug most lately reported as being curative of the form of cystitis in question is salol; and three obstinate cases which were completely cured by its administration are described by Dr. Abbot in the *Boston Medical and Surgical Journal.* Each of the patients had been suffering for a considerable time, and had been treated with palliative means with more or less success, but without any permanent relief being obtained. The dose of salol given was ten grains three times a day, and in each, marked improvement of the symptoms was very speedily observed. One most satisfactory feature in the history is the rapidity with which the cure was effected, a week or ten days sufficing to bring it about in all three instances. When we remember that even months of treatment by other means may terminate in disappointment, it may well be considered that a method which promises so favorably deserves the widest possible trial, and no doubt the usefulness of the drug in question will soon be tested on a larger scale than has hitherto been the case.—*Medical Press.*

Not long since, while reading a history of "provings" of Nux Vomica, we learned that the patient was despondent and buoyant alternately, and that he had a desire to talk about his condition. Constipation, and an occasional sticking pain in the right ear, and a sensitiveness of strong odors were also noticed. He had pimples on his chin, and his dreams were full of bustle and anxiety. On going upstairs he was anxious to get to the top. As we had previously observed that the same symptoms followed the use of pumpkin pie, with the exception that the patient tripped up on a dust pan on the last stair when going down, it occurred to us that pumpkin pie should be added to the pharmacopœia.—*New England Medical Monthly.*

THE NEW METHODS OF TREATMENT IN ERYSIPELAS.—1. *Method of Rosenbach:* Consists in first washing with soap not only the affected part, but the surrounding healthy skin, then applying, each day, a solution of carbolic acid (5 per cent.) dissolved in absolute alcohol. Results, very brilliant as regards both the progress of the malady and the febrile phenomena. The use of absolute alcohol by itself has also produced favorable results.

2. *Method of Nolti:* The affected parts and surrounding skin are covered twice daily with mucilage of gum arabic, mixed with from 3 to 5 per per cent. of carbolic acid. Good results.

Dr. Ebstein mixes the carbolic acid with vaseline.

3. *Method of Koch:* By means of a soft brush, we apply a thin and regular covering of the following pomade:

℞—Creoline, ... 1 gramme.
Iodoform, ... 4 "
Lanoline, ... 10 "

The parts are then covered with leaves of gutta-percha. This has given good results, especially in erysipelas of the face and head.

4. *Method of Nusstaum and Brunn:* Ichthyol with or without collodium. Results favorable and very prompt.

5. *Method of Hallopeau:* A solution of 1 to 20 of salicylate of soda is soaked in a mask of several thicknesses of linen and applied over the parts, after which it is covered with rubber bands, to prevent evaporation. Relief almost immediate; cure in from three to five days.

6. *Method of Hueter:* Injections of carbolic acid in the healthy skin, in doses of from ten to fifteen grammes, distributed in several punctures, at one or two centimetres from the edges of the affected parts, with the following solution, recently prepared:

℞—Carbolic acid (pure),
Absolute alcohol, . . āā 3 grammes.
Distilled water, . . . 94 "

Very painful. Only applicable in severe cases of the head or face.

7. *Method of Kraske:* Scarify the edges before the application of the antiseptic substance.

Dr. Lawenstein advises that the incisions should be made exclusively in the healthy skin, after which the parts are enveloped with a solution of carbolic acid or sublimate.

8. *Method of Wolfler:* Mechanical compression by means of adhesive plaster applied on the healthy skin on the borders of the affected parts, so as to completely surround them.—*Le Bulletin Médical.*

A STRONG solution of soap and water, taken immediately, is an excellent antidote to poisoning by carbolic acid.

DIGESTIVE DISORDERS IN CHILDREN.—Moncorvo (*Arch. f. Kinde*, xi, 5 and 6), concludes a paper with the following propositions:

1. Disorders of digestion in children are very common in Brazil.

2. The high temperature of tropical climates during the long summer tends to the frequent development of gastric disorders, and this may be more or less influenced by the excessive sweating which the heat insures.

3. Gastro-intestinal diseases often co-exist with dilatation of the stomach in children more than two years of age.

4. In children under two years of age defective gastric digestion is usually caused by diminution or absence of free hydrochloric acid in the gastric juice.

5. In the subsequent years of life cases sometimes occur in which there is excess of acid in the stomach, but, as a rule, there is a deficiency, or a want of it, in dyspeptic children.

6. The remedy for deficiency in the supply of acid in the gastric juice, consists in the proper use of hydrochloric acid.—*Amer. Jour. of Med. Sciences*, Aug., 1890.

FLUSHING THE BLADDER WITHOUT A CATHETER.—Staff-Surgeon Rotter, of Munich, recommends the following process of flushing the male bladder, which obviates the introduction of a catheter, and makes it impossible to introduce septic matter into the bladder. An irrigator, filled with a quart of some disinfecting, and perhaps slightly astringent, liquid, at a temperature of from about 82.5° to 86° F., having a tube six feet or more in length, with a perforated and somewhat pointed end—which, according to the size of the meatus, is covered with more or less gauze previously saturated with the disinfecting fluid and greased with antiseptic vaseline—is used. For patients with a very small meatus a thin, gutta-percha drainage-tube a few inches in length is attached to the end of the tube, which is exhausted, and then completely filled with the warm fluid. The patient is told to micturate, if possible, and then to lie on his back, with his legs a little drawn up and his pelvis supported. The end of the tube is then introduced into the urethra to the depth of about an inch, and there held by the physician, who continually presses the glans against the tube. The irrigator is then raised, first three feet high, and then six feet, and in from half a minute to two minutes, or, in patients with a very strong sphincter, in three or three and a half minutes, the liquid begins to flow into the bladder. The amount used is easily determined if the irrigator is made of glass; or, if not, by the vibration that is communicated to the copora cavernosa. If it is intended to fill the bladder completely, percussion, the appearance of the bladder above the symphysis, and, in many cases, the patient's sudden desire to micturate, will give the necessary information.—*Lancet.*

STROPHANIN.—Strophanthus now holds a recognized and valuable place among the remedies used in the treatment of cardiac complaints, being perhaps only secondary to digitalis. An interesting article was read at the Medical Congress held in Vienna in April last, by Rothziegel, on the active principle of strophanthus, namely strophanin. An abstract of the paper is published in the *Centralblatt fiir Klinische Medicin*, 1890, No. 27. The doses given were 0.0002 to 0.0003 gram, amounting to $1\frac{1}{2}$ to 5 milligrams *per diem*. In English measure this would amount to about $\frac{1}{300}$ to $\frac{1}{200}$ of a grain for a dose. It is best given in capsules, and repeated every two hours. Rothsiegel sums up his results thus: (1) The circulation was in most cases greatly improved, the pulse became stronger and more regular, a difference being sometimes noticed in from five to ten minutes after the first administration of the drug, but the full effect upon the pulse was not attained until the second or third day of its use. The improvement occurred later than with digitalis; but if the strophanin were continued its beneficial effects were more lasting, and persisted for some time after the drug had been discontinued. (2) The dyspnœa, palpitation, and other symptoms occurring in organic disease of the heart were much relieved while the patient was taking this drug. As a rule, the dyspnœa disappeared before the palpitation. In cases of so-called "nervous palpitation," strophanin produced some relief, but this was only temporary. (3) The amount of urine secreted was increased, but not until the strophanin had been taken for some considerable period, and, moreover, the quantity passed was not so large as when digitalis or the tincture of strophanthus had been given. The increase in quantity of urine lasted for several days after the strophanin had been discontinued, and was apparently due to increased blood-pressure, and not to any direct action on the kidney. No sign of kidney irritation was noticed at any time. (4) Gastric disturbances even after prolonged use of the drug, were very rare, and even when such phenomena did appear strophanin could be taken in capsules without any discomfort. As a general rule, the appetite was increased. The condition of the stools was not altered. There was no diaphoretic action. (5) The nervous system was only influenced indirectly, and that favorably, owing to the improved strength and regularity of the heart's action. (6) An accumulative action was not noticed in the case of strophanin, and the drug may be continued for weeks without any ill effects. (7) Subcutaneous injections ($\frac{1}{120}$ grain in watery solution), in cases where the heart's action was very weak, produced a rapid and lasting effect on the pulse, and no unpleasant local effects were caused by the puncture. (8) With the tincture of strophanthus, strophanin compared unfavorably. The tincture acted more certainly, quickly, and energetically than the alkaloid; this was especially noticed in its diuretic action. Cases, however, occasionally occurred in which not only the tincture of strophanthus and digitalis, but also the other cardiac tonics, could not be taken, but in which strophanin was well borne, and the latter was found to be a good substitute for the tincture in such cases. Other instances were also noted in which all the cardiac tonics were ineffectual, while the administration of strophanin was followed by satisfactory results. (9) The indications for the use of strophanin in valvular disease, with orwithout affection of the myocardium, are the same as in the use of digitalis; that is to say, when there are indications of heart failure. In acute and chronic Bright's disease strophanin produces diuresis, especially if the heart's action is at all weak.—*Lancet.*

THUNDER AND SOUR MILK.—The effect of thunderstorms in turning milk sour is a matter of constant observation in every household. It is not certainly known to what element in the air this souring action on milk is to be directly attributed, and most people are content to ascribe it to "electricity in the air." An Italian *savant*, Professor G. Tolomei, has lately made some experiments with the view of elucidating this question. He found that the passage of an electric current directly through the milk not only did not hasten, but actually delayed acidulation, milk so treated not becoming sour until from the sixth to the ninth day, whereas milk not so electrified became remarkedly acid on the third day. When, however, the surface of a quantity of milk was brought close under the two balls of a Holtz machine the milk soon became sour, and this effect he attributes to the ozone generated, for when the discharge was silent the milk soured with greater rapidity than when the discharge was explosive, in the former case more ozone being formed than in the latter. The souring of milk is generally attributed to the growth of a ferment (bacterium), which converts the milk sugar into lactic acid. It is possible, then, that the presence of ozone in the air overlying the milk hastens the growth and multiplication of the bacterium. The first observation—namely, the retardation of souring by the passage of a current through the milk—may be a point of practical importance to milk traders. Any methods of preserving milk from its first retrogressive changes, which does not involve the addition of extraneous substances (antiseptics) to the milk, and which is at the same time cheap, effective, and not likely to prove injurious to the consumer, is sure to be welcomed at a time when milk is sent long distances to market, and is often stored for a considerable time before it reaches the consumer.—*Brit. Med. Jour.*

THE CANADA LANCET.

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MEDICAL EDUCATION.

We are firmly of the opinion the time has arrived when a sharp line of differentiation must be drawn between the so-called natural sciences and medical science, and any attempt to substitute comparative anatomy for human anatomy, zoology for physiology, and physics for medicine, cannot but fail in qualifying a student for practice as a physician. It may and doubtless does sevre in some instances as material for display on opening occasions, and serves the purpose of impressing freshmen, and catching the unwary; but the requirements of after years will speedily prove to such that the position of the liver of the frog is no guide to its position in man, that the pyrexial state in the two are by no means the same in their results or tendencies. There are those who think the medical student should devote several years to the study of the natural sciences before coming near a human subject, so that his mind might be the better qualified to battle with the scientific theories of medicine.

Unfortunately the medical students in Canada choose the profession of medicine as a means of livelihood, and not as a mere pastime, and they can hardly afford the time to devote four years to the study of natural science, and three years afterwards to the requirements of the medical curiculum, and after their student days during the time they are struggling to secure a practice, find themselves surpassed in usefulness on every hand by those who have devoted their extra time to acquiring that education and experience for the practice of medicine, which the largest hospitals in Europe supply.

We would like to ask of anyone, who has any experience as to the requirements of a practical physician, whether that student would be best qualified for his life work, who had spent three or four years in the study of chemistry, biology, botany and physics, or the one who having a taste for the practical in his profession, spends three or four years in a large European hospital in daily contact with disease, and learning, in the most direct and practical manner, the methods of relieving pain and suffering. And yet we as physicians allow ourselves to be told by those who neither know nor care what the requirements for a doctor are, that if biology be taught, there will be no need of our students going from the province of Ontario to Montreal, and from the Dominion of Canada to Buffalo, to perfect their medical education, but everyone knows, that the best students of medicine, and the best practitioners do go abroad, not to Buffalo and Montreal, but to New York and Europe, to see practice, to recover the time lost by them in studying the habits, characters and conditions of the bats, owls and moles who for so long forced them to sit blinking over obtuse scientific problems. Among the numbers of medical practitioners, and medical students who every year find it necessary to go to the large hospitals and medical centres abroad, how many go or have ever gone to study biology?

Upon this matter the remarks of Dr Lawson Tait, in his recent address at Birmingham, are as follows:

"Still more strenuously I appeal that our student be altogether relieved from that senseless system of biological training which has set in as a fashion at Cambridge, at Oxford, and at Edinburgh. Not many years ago I attended a lecture on physiology given to medical students, which consisted in an explanation of a brass instrument resembling a model of Clapham Junction, intended to explain something about muscular fibre. I could not understand it, of course, I was too much of an old fogey, but I had this consolation, that when talking over it with my young friends who had attended the lecture with me, they could make nothing of it either, and it worried them as much us it had worried me. But there was a difference between us—it was demoralizing to them, for it discouraged them, and small wonder! And how angry they must feel when they come to deal with human patients and human disease, that all these nonsensical details are of no use to them—not even for the purpose of general training—when they find in truth, that the time occupied in mastering such

subjects has been absolutely thrown away. For students who are disposed to appear for a science tripos, or who have such a line of life open for them, or the tendency towards it, who are possible professors of anatomy or biology, this kind of work is of course admirable; but of our medical students, nine hundred and ninety-nine out of every thousand will have to find their positions at the bedsides of their fellow countrymen in times of accident and sickness, and there such knowledge is useless.

"In the old days—days which I can remember—it was charged against the corporations that they turned out a large number of ill-educated empirical practitioners who knew nothing but their patients. Now I say the tendency is to turn out a still larger number, a very much larger number, of scientific young tyros, who know neither patients nor their diseases till they have gone through a second pupilage extending for years after they have left their university. This second pupilage lies in the rough school of experience, and in its second training they will be found deliberately and at once to throw overboard at least two-thirds of what they have learned in the first. What the boy wants after his general education has been fully developed, and his fundamental knowledge of useful anatomical facts and physiological principles has been made perfect to the utmost of their extent for usefulness, and not one scrap beyond that, is that he should be dealt with as we deal with the cutter of blanks in the button manufactory. He should be put at once into contact with his material. I therefore vote cordially with those who demand the restoration of the apprenticeship system in such fashion as modern requirements indicate. It is, of course, no longer to be a seven years' slavery in mixing pills and spreading plasters, for the modern manufacturing chemist does all that for us now, but it should be a period of at least two years spent in learning how to deal with patients, how to divine their peculiarities, and in learning how to avoid making an ass of himself in the sick room as the modern, newly-fledged, qualified assistant is certain to do for the first few years of his second pupilage, in spite of his biological lore.

"The road to success in the practice of our art lies not only in knowing how to deal with disease, but how to deal with men and women while they suffer from it. Our biological practitioners have no experience of either of these lines of research, and they therefore fail miserably. I had to meet a most excellent and estimable practioner of the old school in the north of England some months ago, and he told me that within a year he had had three assistants, all Bachelors of Medicine and Masters of Surgery from one of our most flourishing biological schools. "Sir, would you believe it," he said to me, boiling with indignation as he thought of the needs of his large colliery practice, "not one of them could put on a splint! and the third was such an ass that he used to lecture a collier's wife on how fishes lost their eyes in coal pits instead of supporting her perineum." I am speaking from a lamentable fulness of similar experience, and I feel that no other remedy is possible than that which I recommend, and the sooner we begin to cry out for it the better. Our corporations are deaf to our appeals upon such subjects, because their rulers no more understand the requirements of the general practitioner than they understand the Confucian system of philosophy."

THE REPARATIVE PROCESS IN THE HEALING OF WOUNDS.

There seemed at one time to be almost a unanimity of opinion among the leading observers upon this question, when once Cohnheim's view of inflammation had recommended itself for general acceptance, as against Virchow's earlier theory of "attraction," or increased nutritive activity, or against the neuropathic theory held by Henle, Stilling, Lubbock and others. The origin of the fibro-blasts, which are the real agents in the *restitutio ad integrum* of an inflamed area, in which the lesion has gone on beyond the possibility of resolution, is now the disputed point. Virchow's theory, long ago advanced, that they originate from the injured but not killed connective and other tissues of the part, has been refused acceptance by observers since, and such authorities as Ziegler have been followed by most of the English text-books on pathology, with the theory that the fibro-blast originates only, or almost only, from the leucocyte. The old theory of Virchow, that the fibro-blast is not a modified leucocyte, but a proliferated connective tissue product, is taken up and defended with the utmost vigor by Hamilton, of Aberdeen, in his text-book on pathology lately issued, and a statement of his

views, since he seems to be the champion of the theory so far as English opinion goes, may not be uninteresting to the reader who has not time at his disposal for a perusal of the new text-book.

It is a fresh local manifestation of the same constitutional disease, the old sore broken out in a new spot, the quarrel between those pathologists who are willing to admit the entrance into their observations and calculations of some factors, other than those that can be explained on purely mechanical grounds, and that other school who seek to eliminate the existence of the mysterious *esse*, known as vitality, simply because they cannot explain it. Perhaps Bland Sutton may stand as the champion among English pathologists, of the non-mechanical school. His description of the defending army of leucocytes, each cell a soldier, always mobilized, hurrying, by the arterial railways, to "the front," the seat of injury, and there either perishing in "the imminent deadly breach," in mortal duel with the invading bacillus, or triumphantly ingesting the foe, as a cannibal might his vanquished enemy, has become classical.

By this school of thinkers, the individuality of the cell is strongly insisted on, and the leucocyte in particular almost spoken of as a separate organism, like the amœba. Metschnikoff, with his classical investigations upon the absorption by phagocytes of the tail and gills of the larval frog, was, perhaps, the apostle of this theory. The other school, of whose views, as already said, Hamilton, may be taken as the leading English representative, would be called by a theologian the more materialistic of the two. For instance, Hamilton so far robs the leucocyte of its active properties as to declare that diapedesis does not depend on a morbid motion, but is due chiefly to intravascular pressure, the cells escaping where the vessel wall is weakest, *i. e.*, through the cement substance between the endothelial plates. Or again, he teaches that the capillary tuft which forms the basis of granulation tissue, is not a new formation, but a morbid dilatation of a pre-existing capillary which can no longer resist the expulsive action of the heart upon the contained column of blood. A brief *resumé* of his whole account of the process of healing may be not uninteresting. He proceeds upon the old clinical division of the process, that of Sir James Paget, into five varieties: By immediate union; by first intention, or primary adhesion; by second intention, or granulation; by secondary adhesion, or union of two granulating surfaces; by scabbing. The five processes are found on investigation to be essentially the same, and healing by immediate union is the type, a clean cut, with pressure at once applied, no bleeding allowed, and no organismal contamination, therefore very little effused matter to be removed, and nothing to retard immediate healing by imposing the necessity of organization of a mass of new tissue, and absorption of exuded matter and blood-clot. In forty-eight hours each surface of cut will be seen to have thrown out a few new large soft round cells, proliferated from the connective tissue cells of the part, not from the wandering leucocytes, which co-exist, but are two or three times smaller. These new cells are fibro-blasts. They soon spindle out, and by change in protoplasm the caudate ends split into delicate fibrillæ, the nucleus persisting with perhaps a portion of the body of the spindle-cell as a connective tissue corpuscle, while the fibrillated portion is known hereafter as a bundle of white fibrous tissue.

(*To be continued.*)

THE VACANCY AT THE HEALTH OFFICE.

Since the issue of our last number we regret to have to record the resignation, in consequence of ill-health, of Dr. Canniff, who has held the position of Medical officer of Health for the past eight years.

Doubtless there will be a large number of applicants for the position and a great deal will depend on the co-operation of the profession in the selection of an officer, who, in all matters concerning infectious diseases and the public health, is placed in a position of authority. Realizing this fact, a meeting of the profession was called and a large and influential number of medical men met at the City Hall about a month ago, from whom a sub-committee of their number, consisting of Drs. Strange, Temple, White, Ross, Nesbitt, Ogden-Jones, Sheard, Burns and Britton were selected to meet a sub-committee of the Local Board of Health. His Worship the Mayor and Aldermen Verral, Gibbs and Graham were present at the joint meeting. The Medical Committee presented a series of resolutions, stating the qualifications for fitness in a Medical officer of Health and recommending

strongly the appointment of outsiders, other than aldermen, on the Local Board of Health. The Mayor was asked "whether it was in the scope of "the rules governing the Board for it to resign "and then the Council to elect new members, ad- "mitting outsiders. The reply was 'Yes,' and it "it is possible that such a course will be adopted. "The meeting broke up after the Mayor and Al- "men assuring the visitors that their suggestions "would receive the greatest attention."

We heartily endorse the opinion of the late medical officer, Dr. Canniff, in a letter to the *Medical Practitioner*, where he says:—"I can "assure the medical profession that, unless they "take strong action in this matter, their views "will continue to be ignored. Some aldermen do "not want an independent Board, nor perhaps an "independent Health officer." Bearing in mind the above facts, it behooves the members of the medical profession in this city to bestir themselves and see that their views, in regard to the appointment of such official, be respected and that "the "committee of medical gentlemen who are to be "appointed to examine into the credentials and "qualifications and report to the sub-committee "of the Local Board of Health the relative merits "of the candidates upon examination," be composed of men well versed in sanitary matters and determined to select the best applicant for the office.

A Rational Treatment of Sciatica.—For the relief of pain in very severe cases, says Hammond, in *N. Y. Med. Jour.*, it is absolutely necessary to use morphine. It should be injected hypodermically, as near the nerve as possible. In milder cases phenacetin, antipyrine or acetanilide might be used. To relieve the neuritis, dependence is placed almost entirely upon rest, the application of cold, and the use of electricity.

Absolute rest is attained by keeping the patient in bed and employing the old-fashioned long splint, reaching from the axilla to the sole of the foot. It should be attached so as to leave the thigh and sole uncovered for the use of electricity. The splint should be removed for a short time every fourth day, in order to manipulate the joints and muscles to a slight degree. Cold should be applied to the sciatic region by means of ice bags.

Electricity is very useful, and only the continuous current should be employed, and in the following manner:

The negative electrode should be nine by four inches in size and should be strapped to the sole of the foot. The positive electrode about five to six inches square should be applied over the glutial region, over the point of the exit from the pelvis of the sciatic nerve. If there are any tender points along the course of the nerve, this electrode should be changed occasionally, so as to cover them. The strength of the current should not be such as to cause much pain, but should fall short of this. The continuous current should be applied twice daily for about five minutes at each *seance*.

Relation of Tonsillitis to Rheumatism.—Dr. R. Hingston Fox (*Br. Med. Jour.*), says:—1. Evidence justifies us in associating together as allied diseases, the following group: Scarlatina, diphtheria, enteric fever, the forms of tonsillar inflammation, classed under epidemic sore throat, and simple tonsillitis, and, lastly, acute rheumatism. This might be styled the "lympho-rheumatic" group of diseases, having some of the following features in common: Acute lesions of the tonsil or of other lymphatic organs of the digestive tract, arthritis, inflammation of endocardium and pericardium, and of serous cavities. In all but rheumatism the course is fairly definite. It is common even in simple tonsillitis, to find some signs of a cardiac disturbance. The second sound is markedly accentuated, and both sounds are generally re-duplicated. 2. There are no grounds as yet upon which to base any hypothesis as to the morbid processes in this group of diseases. It is clear, however, that the lymphatic system with which the tonsils, ileo-cæcal glands, serous cavities, and perhaps the joints, are connected, is especially concerned. 3. Evidence does not at present justify the inclusion of true quinsy in this group of associated diseases.

Recovery from Traumatic Tetanus.—A. Holdrich Fisher, M. D., records a case (*Lancet*) of tetanus resulting from a wound in the forehead, the disease appearing on the eighth day after the accident. The symptoms came on in the usual way, and were characteristic. The patient was able to swallow at first, so was ordered nourishing fluids, ice

to the neck, a quiet and dark room and a mixture containing five minims of tincture of belladonna in a little water, every four hours. The case went on till a state of complete opisthotonos supervened with occasional spasmodic seizures, during which he became cyanotic. Nutrient enemata took the place of stomach feeding on account of the difficulty he now experienced in swallowing. The mixture was now changed to one consisting of ten minims of spt. sulphuric ether, three of chloroform, and three of tinct. digitalis in a drachm of water, with lin. belladonnæ to the spine. On the twelfth day he began to improve. This improvement continued till at the end of about a month and a half he was up and well. The writer thinks that pieces of grass fibre which had been left in the wound when first dressed by the lad's mother, and which were discharged at two separate times, were the potent factors in causing the mischief. The case is interesting as a recovery from a genuine case of tetanus, but how does the theory of the presence of grass fibre in the wound, accord with the now rather prevalent idea, that tetanus is a specific disease?

Sodium Salicylate in the Treatment of Chorea.—Dr. Dresch, in an article in the *Bulletin Général de Therap.*, speaks very highly of the action of salicylate of sodium in cases of chorea. He says the disease is of greater gravity than is generally supposed, and is not infrequently, directly or indirectly, the cause of death. He believes chorea is a microbial disease, the microorganism of which, is probably of the same family as that of rheumatism. Energetic treatment should be begun at the earliest possible moment. The drug is administered because of its action upon the medulla and cord, where it affects the motor centres as well as the sensory, and not because of any special action as a germicide or antirheumatic. Apart from the sedative action of this drug, it possesses another great advantage, in that it increases the elimination of waste products. As it is evident that the choreic movements must greatly augment the amount of waste products, it is of the utmost importance, that any remedy given for the disease should favor the elimination of these materials by the kidneys and other enunctories. The salicylate is well borne in most cases, a child of twelve years taking without trouble as much as sixty grains in twenty-four hours, the only precaution being to give the drug in small and frequently repeated doses, well diluted with slightly alkaline water. It is not usually necessary to continue the use of the drug more than eight or ten days. Rest in bed, a well-ventilated room, avoidance of noise, and a milk diet are all of assistance in promoting the beneficial action of the drug.

The Pasteur Institute at New York.—Dr. Paul Gibier, Director of the New York Pasteur Institute, sends us the following results of the preventive inoculations against hydrophobia, performed at the above Institute since its opening in February, 1890:—610 persons, having been bitten by dogs or cats, came to be treated. In the case of 480 of these persons it was demonstrated that the animals which attacked them were not mad. Consequently the patients were sent back after having had their wounds attended, during the proper length of time, when treatment was necessary. In 130 cases the anti-hydrophobic treatment was applied, hydrophobia having been demonstrated by veterinary examination of the animals which inflicted bites or by the inoculation in the laboratory, and in many cases by the death of some other persons or animals bitten by the same dogs. In every case the treatment was successful, all of the patients being at present in good health. The applicants were from twenty States and Territories and one from Ontario.

Iodoform Injections in the Treatment of Cold Abscess.—Dr. Jasinski, of Cracon (*Lancet*), has treated eighty-six cases of cold abscess by means of injections through a trocar of iodoform emulsion, with encouraging results. A certain number were cured by a single injection, others after two or three injections. In eleven cases after the injection the abscess broke, a large quantity of pus mixed with iodoform being discharged. These were all cured without any further surgical interference. In nineteen cases an incision had to be made, the cavity was then washed with carbolized water, iodoform emulsion injected, and the wound sewed up after a drainage-tube had been inserted. In some of these cases, the injection had to be repeated several times. Though 180 grammes of a ten per cent. emulsion were injected at once, no toxic symptoms were ever observed.

SALT IN MILK FOR CHILDREN.—Dr. A. Jacobi (*Arch. of Ped., Am. Jour. Med. Assoc.*) says that the addition of sodium chloride prevents the solid coagulation of milk by either rennet or gastric juice. The cow's milk ought never to be given without table salt, and the latter ought to be added to a woman's milk when it behaves like cow's milk in regard to solid curdling and consequent indigestibility. Habitual constipation of children is influenced beneficially, since not only is the food made more digestible, but the alimentary secretions, both serous and glandular, are made more effective by its presence.

FUNDAMENTAL FACTS.—A German doctor claims that any good soap containing not less than 25 % of glycerine will act as well in suppository form as the 95 % suppositories now so largely used. An Ontario *confrère* has been testing this matter somewhat and his observations lead him toward the opinion that the soap is 33 % slower in action than the solidified glycerine, while its fæcal dividend is notably less. *Per contra*, glycerine soap can be bought anywhere, is easily cut with a penknife, and will prove at times a convenient substitute for the more active, elegant and expensive suppositories.

FIFTY YEARS OF PRACTICE.—The medical fraternity of Montreal did a graceful act, in banqueting, on the 16th ult., the veteran Dr. D'Odet D'Orsonnens. The president was Dr. J. L. Leprochon, and Drs. Rodger and Desroches acted as joint secretaries. The banquet was a complete success. We congratulate the venerable Dr. D'Orsonnens in his having completed the fiftieth anniversary of his entry into the profession of medicine and wish him long life, health and happiness.

LAWSON TAIT has been evincing his iconoclastic tendencies rather more frequently than usual of late. He says of Emmet's operation on the cervix uteri, that it is one of the most useless ever introduced into surgical practice. He believes that the laceration is of the slightest, if of any, importance, and that the real evil is the subinvolution and consequent chronic metritris. There is enough of the ordinary, common, hen sense in his remarks to commend them to practitioners who are not gynecologists, whatever impression they may make upon the minds of specialists.

BILIARY CALCULUS.—Dr. Fisher, of Philadelphia, reports (*Med. Mirror*) a case of gall stones successfully treated by large doses of olive oil. During an attack he gave a half pound of olive oil, and one hour later another half-pound. Three hours after taking the last dose, a stone as large as the last phalanx of the thumb came away. A week later another attack was treated similarly and with a like result.

SYRUP OF HYDRIODIC ACID.—H. M. Field, M. D. (*Med. Mirror*), in an interesting paper says that hydriodic acid should be given on an empty stomach or not at all; and recommends its use in the more chronic conditions of asthma, bronchial or pulmonary catarrh, and chronic accumulations of serous fluid. It should be kept from the light and not exposed long to the air, and at a medium temperature between 32° and 100° Fahr.

CHRONIC PHARYNGITIS.—The following is said to be a good application:

℞—Ergotine, ... gr. xv.
Tr. Iodine . . . . . ʒ j.
Glycerine . . . . . ℥ j.—M.

Sig.—Apply three times a day with a camel's hair pencil.

EMETIC FOR CHILDREN.—Dr. John Brown, England, says:—Apomorphine is "the emetic *par excellence* for children, when given hypodermically." He prepares his solution as follows:—

℞—Apomorphia mur. . . . . 1 gr.
Sp. vini. rect. . . . . 20 min.
Aquæ . . . . . 110 min.

Each ten minums equals one-twelfth of a grain of the alkaloid. The dose for hypodermic injection varies from two to ten minims according to age.

BURNS.—As an application for burns, the following is recommended:

℞—Salol, ... gram 1.
Ol. olivæ,
Aq. calcis, ... ãã grams 70.

M. Sig.—Apply on cloths.

Or.

℞—Tannin, ... gr. xv.
Alcohol, ... ♏ xv.
Aitheri, ... ʒ jss.—M.

Sig.—Apply: repeat two or three times a day.

TREATMENT OF PALMAR ABSCESS.—Dr. Spiers, of Edinburgh, O., writing to the Cincinnati *Lancet-Clinic*, draws attention to the good results obtainable by the seton in abscess beneath the palmar fascia. He says: In my experience poultices and fomentations amount to but little. In the use of the lance, whether early or late, parts are severed that never again unite; the hand is left disabled as a consequence. If the abscess be allowed to remain unopened, the pus burrows into, or so paralyzes the muscles of the hand, that its use is ever after limited. In either case a claw hand is the result.

I have seen a number of cases and have closely observed the results of treatment. To me no method has proved so satisfactory as the following: Pass a large needle, with a curved point carrying a double thread of surgeon's silk, near or into the annular ligament, well into the tumor and let it emerge between two of the fingers—preferably the ring and middle. The operation is brief, the pain little; but an anæsthetic may be used, or a hypodermic injection of morphia or cocaine may be given if preferred. The double thread is left long, and is knotted at both ends. By alternately pulling the thread backward and forward any pus along the line readily makes its exit. The parts gradually settle back to their wonted place, and recovery is complete. This operation has the merit that it may be used early or late. Of course, it will not retrieve any damage already done. I have frequently resorted to this method in tumors of the face and neck, where it is dangerous to lance or where a scar is not desired, usually with good results.

NUTRITIVE ENEMA. — M. Jaccond's nutritive enema (*Jour. Am. Med. Assoc.*) is made as follows:

℞—Beef broth (freshly made), . ℥ viij.
Wine, ... ℥ iv.
Yolks of eggs, ... ij.
Dry pepton, ... ʒ j.-iv.—M.

Sig.—Mix and make an enema, to be injected in small portions at intervals during the day.

THE URINE OF OPIUM HABITUÉS.—Dr. J. B. Mattison, of the Brooklyn Home for Habitués, writes to us (*N. Y. Med. Jour.*) concerning a statement that he has met with in contemporary periodical medical literature, to the effect that the addition of tincture of chloride of iron to the urine of a subject of the opium habit will produce a blue tint showing the presence of morphine. Dr. Mattlson declares that this statement is not true.

FLATULENT DYSPEPSIA (*Med. Review*) is treated by Huchard as follows:

℞—Aq. chloroformi, ... ℥ x.
Aq. dest., ... ℥ viij.
Aq. menthæ pip., ... ℥ ij.—M.
Sig.—ʒ j. before or after meals.

Or,

℞—Tr. gentianæ,
Tr. valer.,
Tr. nucis vom., ... āā ʒ j.
Chloroformi, ... gtt. xx-xl.

M. Ft. Sig.—10 to 20 drops in a little water, fifteen minutes before a meal.

If an antiseptic action is required, we prescribe:

℞—Beta naphthol,
Bismuth salicyl.,
Magnesiæ, ... āā ℈ iv.—M.

Ft. pulv. No. 30. Sig.—One powder before each meal.

SEMINAL EMISSIONS.—As a direct means of diminishing the frequency of nocturnal emissions, Bumstead recommends:

℞—Potassii bromidi, ... ℥ j.
Tr. ferri chlor., ... ℥ j.
Aquæ pur., ... ℥ iij.

M. Sig.—One or two teaspoonfuls in water an hour after meals and at bed time.

SOLVENT FOR DIPHTHERIC MEMBRANE.—

℞—Pepsinæ, ... ʒ jss.
Ac. hydrochlor. dil., . . . ♏ j.
Aq. dest.,
Glycerinæ, ... āā ℥ ss.—M.
Sig.—Paint.

INFANTILE DIARRHŒA.—

℞—Ferri sulph.,
Sod. salicyl., ... āā gr. x.
Glycerinii, ... ʒ iij.
Aq. dest., ... ℥ ijss.—M.

Sig.—A teaspoonful every one, two, or three hours.

Books and Pamphlets.

THE THROAT AND NOSE AND THEIR DISEASES. By Lennox Brown, F.R.C.S.E. Third edition, revised and enlarged. Philadelphia: Lea Bros. & Co. Toronto: Vannevar & Co. 1890.

If asked, "What principles guide you in the selection of medical books for purchase?" how many in our profession could give satisfactory answers? The text-book that has stuck to us from student days, and the subscription work forced upon us by glib-tongued agents, with bound and unbound journals, make up the great bulk of what is to be found upon our library shelves. Do these, in a satisfactory manner, supply the needs of general practitioners called upon to meet and to treat every variety of human ailment? If they do not, what better plan for selection and purchase can be suggested?

Many years ago, the writer made a resolution thereafter to buy only monographs, and by comparison, to find out, before purchasing, what particular one most helpfully and fully presented existing knowledge on its subject.

To Pepper and to Ashurst we are under obligation for our very best collections of monographs, but each of us needs to have at hand a special work, for example, on the eye, the ear, the nose, on operative surgery, on electro-therapeutics, etc. Well and carefully choosing these, a physician can make their cost his very best investment. No one of us can afford to waste time over books that are barred from being helpful by the statute of limitations.

In the work before us, we have an excellent example of just what a monograph should be. Its artist-author, with pencil and pen, has made this third edition practically a new book, and has incorporated in it the results of the best work done in his specialty up to the present year. He is less insular than English writers on medicine are, as a class, and has drawn freely from continental and American sources to perfect his descriptions and methods.

In this, he has not been more than fair, since America is the natural home of nasal catarrh, and in the nasal cavities we now know we have to look for the point of departure of most faucial, pharyngeal and laryngeal diseases. A very timely warning is given by the author in regard to the routine, or careless prescription of cocaine preparations for the relief of slight symptoms.

The plates are admirably drawn, and even if, at times, over-colored, are far and away the best helps of the kind which we have.

In the illustrations and letter press the book-maker's art is seen to good advantage, while paper and binding are up to the publisher's well-known high standard.

THE SCIENCE AND ART OF OBSTETRICS. By Theophilus Parvin, M.D., LL.D., Professor of Obstetrics and Diseases of Women and Children in Jefferson Medical College, etc. Second edition, revised and enlarged; two hundred and thirty-nine wood cuts, and a colored plate; pp. 704. Philadelphia: Lea Bros. & Co. Toronto: Carveth & Co. 1890.

In this, the second edition of his excellent book, Dr. Parvin has brought the subject of midwifery up to the latest date. All important information to be had on the subject will be found within its pages, well arranged and lucidly put. The book is a useful one, both for students and practitioners, and will, we have no doubt, take its place among the classical literature of the day. The illustrations are of the best, and the letter press everything that could be desired. We can commend the book as one of the best in existence on the subject.

QUIZ-COMPOUNDS, EQUINE ANATOMY AND PHYSIOLOGY. By Wm. R. Ballou, M.D., Professor of Equine Anatomy, New York College of Veterinary Surgeons; Instructor in Genito-Urinary Surgery, New York Polyclinic, etc., etc. Twenty-nine illustrations. Philadelphia: P. Blakiston Son & Co. Toronto: Vannevar & Co. 1890; pp. 205.

A useful little book for veterinary students, and others interested in equine anatomy and physiology. The scope of the book is similar to the others of the series, of which this is No. 12. All important facts are put down in condensed and easily getatable shape.

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Original Communications.

THE TREATMENT OF PYOTHORAX, AND THE MECHANICAL RESULTS OF OPENING THE PLEURAL CAVITY.*

BY ANDREW H. SMITH, M.D., NEW YORK,

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(*Continued from November Number.*)

But to return to our subject; the degree of expansion which would be maintained in this motionless condition of the lung would depend upon the frequency and force of the respirations, the elasticity of the lung tissue, the character and quantity of the secretion from the bronchial surfaces, and, more than all, upon the action of the glottis. Just in proportion as this is valvular, facilitating the ingress and impeding the egress of the air, just in that proportion, *caeteris paribus*, will the distention of the lung be greater.

If now we proceed to decrease the size of the wound still further, we shall find the *rôle* which expiration has played as a distending agency is gradually transferred to inspiration. With each progressive step the increasing difficulty with which the air finds admission through the wound results in an increased supply by the trachea, and a greater distention of the lung.

In like manner, the removal of the air from the lung, which before was accomplished by inspiration, has now become the office of expiration. As the chest contracts, the pressure of the air within it upon the lung is more and more decided as the opportunity of escape through the wound is more and more diminished, and thus the amount of air remaining in the lung at the close of expiration constantly becomes less.

Thus we see that the lung is gradually escaping from the influence of the movements of the opposite thoracic cavity, to which it was at first entirely subjected, and is resuming its proper relations to the movements of its own side; and at last, when we reach the point of complete closure of the wound, we shall find that the quantity of air passing into, and out of the lung, exactly corresponds to the expansion and contraction of the cavity in which it is contained. There will then occur with expiration that complete collapse of the lung which took place with inspiration at the other end of the scale, and which could not occur at any intermediate point; while the maximum of inflaation, which then coincided with complete expiration, is now observed at the termination of inspiration.

This change in the mechanism of the respiration is accompanied by a notable change in its physiological result. While the rising and falling of the lung was merely the result of the action of the uninjured side, not only was it of no avail in depurating the blood, but the action of the other lung was also impaired, since the crippled lung served merely as a reservoir into which its fellow breathed a portion of its vitiated air, to inhale it again at the next inspiration. But the moment the expansion and contraction of the lungs becomes synchronous on the two sides, this abnormal action ceases.

Hence, the difference in the degree of dyspnœa caused by a large and a small wound, though the play of the lung may be the same.

My views, then, as to partial collapse of the lung, may be summed up as follows:

There is a certain size of wound which results in a condition of partial and continuous inflation of the lung, to which both inspiration and expiration contribute.

A wound larger than this causes a greater degree of inflation during expiration, and a less degree during inspiration, the disparity increasing with the size of the wound.

A smaller wound causes a greater degree of inflation during inspiration and a less degree during expiration, the disparity increasing in proportion to the diminution of the wound. Complete collapse can occur only when the wound is very large, or when it has become entirely closed, with the

* Read before the Ontario Medical Association, June, 1890.

cavity of the chest filled with air. In the former case, it continues only during inspiration; in the latter, only during expiration. These conclusions do not apply to those cases in which the wound has a valvular character, nor, without modification, to those in which air is escaping from a wounded lung into the pleural cavity.

A wound in the thorax, which affords greater facility for the entrance than for the exit of air, will cause an accumulation within the pleural cavity and consequently pressure upon the lung, and a greater or less degree of collapse of the latter. On the other hand, a valvular wound which favors the egress rather than the ingress of the air, will tend to a greater degree of inflation of the lung, than would occur if the wound were not valvular. So much for the behaviour of the lung when the thorax is opened in the healthy subject. But the case is quite different under the conditions which are present in empyema. Here we have the lung compressed to a greater or less extent by the effused fluid, in fact it may be reduced to a small fleshy mass, almost impervious to air. In addition to this it is covered by a more or less dense, unyielding pyogenic membrane formed from and upon the pulmonary pleura. It will be seen, then, that the conditions are unfavorable to the re-expansion of the lung, and just in proportion as these conditions are well marked will such re-expansion be imperfect, if not impossible.

Now, what is the mechanism by which expansion more or less perfect is obtained when the chest has been freely opened? We have removed the fluid from the thorax with a freedom proportioned to the size and character of the opening, and with it have removed the force by which the lung was compressed. We have made an opening through the chest wall which nullifies the effect of the respiratory movements of that side. The lung, then, is apparently removed from the operation of any force which could affect it either to compress or distend it. How then is it to regain its function even ever so imperfectly?

To the solution of this problem nature brings two new forces, which together are capable of producing remarkable results. One of these we have in a measure considered. This is the distending force of the air driven from the sound lung into its disabled fellow. In ordinary respiration this amounts to but little, but in the act of coughing the force exerted is very considerable. Now, in these cases cough is always present, and thus at short intervals the sound lung is fully inflated, the glottis is closed, the expiratory muscles on the sound side are brought into special activity, and air is driven with force into the collapsed lung. In this way air passages long closed are opened up, adhesions confining the lung are little by little overcome, the thickened and rigid pulmonary pleura is stretched and thinned, and the way is prepared by which under the influence of the second force the lung may gradually be brought into a fairly active condition.

But this inflation of the compressed lung by the aid of the sound one, is antagonized to some extent by the reverse action which takes place in inspiration. With each expansion of the sound side the pressure within the affected lung is diminished, and a tendency to greater collapse is produced. This might be obviated by a different arrangement of the opening in the chest, as we shall see further on.

The second agency in distending the lung is the constantly advancing adhesion of the two pleural surfaces. During the presence of the fluid the summit of the lung is usually adherent to the chest wall, and after the fluid is evacuated the line of adhesion advances steadily downward, provided it is not interfered with by untoward influences. The process is similar to what we see when a burn affects the adjacent surfaces of two fingers. Union of the two granulating surfaces begins at the basis of the fingers and advances slowly towards the tips, resulting in a connecting web. So, too, in syphilitic ulceration of the throat, a line of adhesion forms between the soft palate and the wall of the pharynx, and advances gradually from the sides toward the centre.

In the case of the lung becoming thus adherent to the chest wall, it is forced to partake of the movements of the latter, and is pulled open with every inspiration, instead of being distended as in health by pneumatic pressure. It is as if the india-rubber bag, in this apparatus, were glued to the inside of the bellows.

In favorable cases, that is to say, in cases in which the compression has not lasted too long, and the adhesions which bind down the lung are not too strong, the expansion under the operation of these two forces may be complete. But we

may contribute still farther to this result by using drainage tubes so arranged with valvular openings as to give free egress to the air while impeding its entrance. Such tubes are easily prepared by closing the outer end and cutting a tongue on the side of the portion which is to project from the chest. Even though the tube may not fit accurately in the wound, and air may pass beside it, still this valvular arrangement will have some effect in lessening the internal pressure and thus favoring expansion of the lung. Indeed, unless such tubes are employed, I should condemn entirely the method by drainage tubes as distinguished from the free incision. It is easy to see that with a small opening the comparatively long inspiration would fill the cavity with air which would not readily escape in the shorter time allowed for expiration, and that thus there would be a pressure upon the lung during expiration which would tend to strip it from its newly formed adhesions to the chest wall. And, inasmuch as complete adhesion of the pleural surfaces is the condition upon which the abscess is gotten rid of, this adhesion must above all things be promoted.

It is usually necessary, however, to resect a portion of rib, in order to maintain a sufficiently large opening for the drainage tubes, and in old and neglected cases in which the lung is not likely to expand fully, it is probably better to remove enough bone at the first operation to allow the necessary falling in of the chest. But in any case, the opening made in the first instance should be large enough to secure the removal of any fibrinous masses which may be floating in the pus. These masses are sometimes quite large, and if retained in the abscess cavity are likely not only to obstruct the drainage, but by their decomposition to give rise to sepsis.

A sufficiently large opening having been made, it should be kept open by the insertion of two or more large valvular drainage tubes placed side by side. Granulations form rapidly around and between the tubes, and soon close all the exterior space. The air then finds but scanty entrance into the cavity, and with each inspiration an expanding force is exerted upon the compressed lung. At the same time in coughing, laughing, etc., the air within the cavity is readily diven out through the valvular openings and thus opposes no obstacle to the expansion of the lungs. We thus have the resources of nature conserved to the greatest degree possible and applied to the expansion of the lung. But I believe that we may go still farther, and so assist nature as to obtain, even in the most unfavorable cases, more favorable results than could otherwise be secured. The distending force derived from the sound lung may be employed at pleasure by the patient, and he has it in his power to graduate this force according to the sensations produced in the lung. Let him then be instructed to take a deep inspiration, close the nostrils, and make a long steady expiratory effort, so regulating the force of this effort as not to cause any considerable pain in the affected lung.

This procedure may be repeated many times each day, and unless the air-tubes and air-cells are entirely obliterated there can scarcely fail to be a gradual inflation of the compressed lung.

And now a few words in regard to washing out the cavity. A common error is that of using antiseptic solutions of such strength as to impair the vitality of the delicate connective tissue which is the immediate agent in effecting the union of the opposing surfaces. Such solutions, applied often, also with too much pressure, are responsible for many failures to secure the best attainable results. They are also liable to produce poisoning by absorption into the circulation. This is especially true of carbolic acid, which cannot be used in any efficient strength without danger, and should therefore be discarded entirely, Time will not permit a consideration of the various disinfectants that may be employed in the comparatively rare cases in which their use is indicated. It is only when the temperature and the condition of the discharge give evidence of the presence of septic material that antiseptics should be employed. Bowditch found washing out the chest necessary in one case in 399 operations. If the discharge has an offensive odor, irrigation of the cavity with simple boiled water, or with a solution of mercuric bichloride in the proportion of one to ten or twenty thousand, or with creoline one to 500 or 1,000, will usually suffice. These fluids must be introduced with very slight pressure, and the greatest care must be observed to secure ample outlet for the return current.

SCROTAL TUMORS.

BY A. B. WELFORD, M.B., ETC. WOODSTOCK.

Mr. President and Gentlemen,—In my selection of this subject it has not been so much my intention to go into the history, pathology and treatment of all tumors affecting the scrotum and its contents, as to endeavor to give the history of a somewhat unusual complication affecting those structures, and its treatment. I shall not even enumerate the different diseases of those parts, as any good text book will give you much more information regarding them than I can possibly do. If in the naming of my paper "Scrotal Tumors," I have disappointed any one's expectation, I trust that I shall be able to make amends by this short paper which I am about to read. The title of my subject is, "Spontaneous Hæmatocele of the Tanica Vaginalis, complicated with Varicocele and Encysted Hydrocele of the Spermatic Cord."

On April 21st, 1887, D.B., aged 30, presented himself at my surgery for the treatment of a tumor of the scrotum. He possessed but one testicle (the left) and was anxious to have this saved if possible. The tumor had been growing gradually larger for several years, so that when I examined him it was about the size of a large cocoanut and by its weight had stretched the scrotal tissue to such an extent that the tumor hung down to within two inches of the upper margin of patella. He latterly had it gathered up in a suspensory bag which he had improvised himself. Upon a closer examination the neck of the tumor, or more correctly, the tissues surrounding the spermatic cord between the top of the tumor and the external abdominal ring, contained a mass of dilated spermatic and scrotal veins, six inches in circumference. Light could not be transmitted through the scrotal tumor; there was no history of injury, in fact he had guarded against injury with religious care, as he had never possessed but the one testicle. Its shape was pyriform, very tense, smooth, not painful, and there was no impulse on coughing. I concluded that I had to deal with a varicocele and hæmatocele of the tunic or a solid tumor. I decided to operate upon the varicocele first, as by this means I hoped to reduce the liability to return of the hæmatocele (if it turned out to be such after tapping). In the treatment of the varicocele I was induced for two reasons, to use the elastic ligature; first, because I had read several articles in the London *Lancet* where this ligature had been used with such good results, and the theory of its action in gradually occluding the vessels by its own elastic contraction, commended itself to me; and, second, in several previous cases where I had operated by means of the hard rubber button, (this I believe was the suggestion of Mr. Burwell, of London,) which has two diverging canals from a common exit on the under surface, to corresponding pins on its upper surface, around which the wire is to be twisted, it had not fulfilled all the objects that had been claimed for that process, as in every case but two I got ulceration of the skin where the button pressed, notwithstanding the precaution I took to pad it well with thick spongy antiseptic felt, and in one case I was obliged to operate a second time on account of the wire breaking and being lost, by being twisted and untwisted so many times to take up the slack. Owing to the two latter disadvantages I have used this small invention of my own, which, though very crude, admirably does away with all danger of the breakage of wire, but does not give immunity from danger of ulceration of the part pressed upon. During the operation with the elastic ligature, although I had taken the precaution to have a triangular-edged cutting needle made to give ample room for the passage of the elastic, I found it impossible to draw it through when the needle was being passed between the spermatic vein and the scrotal skin. In my endeavor to form a loop around the veins, and in trying to withdraw the elastic it broke and a piece remained in, which subsequently produced a large abscess, and was afterwards found in the discharged pus; the operation was completed by means of a platinum wire and effected a good cure of the varicocele, the wire coming out on the sixth day. The instrument I now use has advantages over both the others by avoiding ulceration, danger of breaking wire, and is altogether much cleaner, less painful, and more reliable in every way. In a simple case of varicocele I have not found it necessary to confine my patient even to the house, but they may go about their work with very little inconvenience. Ten days later, on May 1st, I tapped the tumor and found it to be an hæmatococle, drawing away fifteen fluid ounces of a reddish brown color, with some fibrinous shreds. I was

* Read before the Ontario Med. Association, June, 1890.

somewhat surprised to find that this did not entirely reduce the bulk of the tumor as there was still left a hard rounded lump about the size of a hen's egg. I thought that this probably might be indurated deposit of fibrin, so did not proceed further. On turning around to get the plaster, etc, to strap the scrotum, to my surprise the tumor was as large as ever; no doubt I had punctured a large vein somewhere near the inner surface and the hæmorrhage had refilled the sac. I confined my patient in bed to avoid any further danger and in seven days, May the 8th, laid open the sac, and evacuated about the same quantity of a reddish brown fluid, but containing more blood than the former tapping. The inside of the sac was almost entirely lined by layers of fibrin giving very much the appearance of an aneurismal sac. The tumor, which was not reduced by the first tapping, turned out to be an encysted hydrocele of the cord, which was also laid open, with the escape of about one ounce of clear hydrocele fluid, and was dressed in the same way as the tumica taginalis by solution of iodoform in ether, and padded with bichloride gauze. The testicle was much larger than normal, but I believe that a good deal of its increase in size was due to deposit of fibrin upon it, as it had quite lost its external normal appearance. The wound healed nicely in about two weeks. Six months after there still remained a large amount of adventitious tissue and scrotal skin, which was cumbersome to him, so I suggested that in six months more probably it might be advisable to remove a piece of the skin and thus reduce its bulk. In June, 1889, he again called upon me and wished something done to reduce the size. I accordingly removed a large eliptical piece of skin from the anterior and under-surface of the scrotum, which has very much reduced the size and relieved the necessity for a suspensory bandage. He is now in New York, and writes that he is in good health and comfortable in every way. He is enabled to rest very comfortably on the left side. The result in this case has been very satisfactory indeed, ridding my patient not only of a very cumbersome and disfiguring trouble but no doubt has saved the integrity and function of the testicle, as it has regained its normal size and consistency.

GANGRENE CHECKED BY IMMERSING THE LIMB IN ALCOHOL.

BY L. W. ALLINGHAM, M.D., BISHOP, INGO CO. CAL.

I had a case of gangrene of the third finger which extended rapidly into the hand in spite of all I could do by following the directions of all authorities I have seen on the subject. The purplish color advanced steadily under the serous bleb, until it reached the middle of the metacarpal bone. In the palm this color was not perceptible, owing to the thickness of the skin, but it presented a peculiar tallowy color to a corresponding extent.

Believing that any further advance would entail a loss of part, if not the whole, of the hand, I felt justified in indulging in an experiment that seemed to me likely to succeed. I immersed the hand in alcohol, contained in a large pitcher suspended over the patient, as he lay in bed, elevating the hand to prevent swelling of the arm. The alcohol was kept warm by means of a coil of rubber tubing in the bottom of the pitcher, through which hot water was kept flowing.

The advance of the dreaded purple color was checked. The already gangrenous tissue assumed a hard, cooked appearance. I continued this plan of treatment for about sixty hours, when I replaced the alcohol by a boracic acid solution, kept hot by the same apparatus. This acted as a most efficient poultice, and in a short time the dead tissue was cast off, fortunately leaving enough live tissue next the bone to throw out granulations. In time the hand and finger made a perfect recovery.

Case II.—A case of blood poisoning. Patient had skinned a cow that had died twenty-four hours before. Some sores on the hand admitted the poison and septicæmia set in. When I was called, patient had a temperature of 104°, and the glands at the elbow and in the ascilla were enlarged and tender.

I immediately employed the same treatment as above, at the same time opening up the sores thoroughly, as well as some serous blebs above the sores. After a few hours, the temperature began to come down, and no other blebs formed. The disease was checked and the patient soon recovered. In both instances I administered 10 minum

of tincture of iron and one grain of quinine every hour for two days, then every three hours.

CASE III.—Occurred in the practice of a surgeon in a neighboring village, 45 miles away. This case had advanced so far that one metacarpal bone and finger had been removed, in hopes of checking the advance of the disease. Pus formed in the hand and wrist, and the hand was riddled with incisions to provide drainage. The hand and arm were immersed in alcohol as described above and made a very good recovery.

The change for the better, which took place immediately in each of these cases, makes me believe that alcohol is almost a specific in all such cases.

Selected Articles.

KOCH ON BACTERIOLOGY.

The following abstract, by the *Lancet*, of Prof. Koch's address at the 10th International Congress, will be of interest to our readers, in view of the development of his consumption cure, which is now on the *tapis*, as it brings us up to date regarding bacteriology:

His address was an admirably clear account of bacteriological research. Only fifteen years ago one regarded the micro-organisms occasionally observed in the bodies of diseased animals and persons, more as curiosities than as things essentially connected with the disease. And, considering the great ignorance of their nature which then prevailed, this could not but be so; there were investigators, for instance, who declared bacteria to be crystalloid bodies, not living organisms. With the perfecting of the magnifying instruments, the application of staining, the propagation of organisms on nutritive media, culminating soon in pure cultivation, a rapid change took place. It became possible to distinguish a number of quite definite sorts with certainty, and to ascertain that they were distinctly connected with the diseases in which they were found. It was further ascertained that one sort of bacteria was not transformed into another, and the remarks of old writers on leprosy and consumption, for instance, even justified the conclusion that, just as certain diseases, presumably caused by micro-organisms, had remained unchanged, their germs also must, on the whole, have retained their old qualities. Within certain limits, indeed, deviations of demeanor had been observed in some bacteria, but that was the case among the higher plants, too, without the varieties ceasing to belong to the species. The main gain of this period of research was the recognition of the fact that the thing was to discover as many morphological and biological qualities of a bacterium as possible, so as to be guarded against the danger of confounding various bacteria. There was still a danger of this with certain bacteria, the typhus and diphtheria bacilli, for example, whereas it had been removed in the case of the tubercle and cholera bacilli by the very exact investigations of these organisms. In their case, too, however, the bacillus must never be determined by one mark alone. He had experienced this in his own case, having for some time taken the bacillus of chicken cholera—for the special study of which he had not had material,—for a variety of the bacillus of Asiatic cholera, till a new series of experiments had convinced him of his error. Whether the germs of chicken cholera would have an injurious effect on human beings was still a question, and a question that would not easily be answered, as one could not well make direct experiments on human beings, but must wait to see whether the bacillus of chicken cholera would not one day appear in a human cholera patient. As to the etiological connection of the noxious bacteria with infectious diseases, general opinion was at first against it, and strict proof was necessary. It was necessary to prove, in all cases, that the disease and the micro-organism always appear together, that the micro-organism in question does not appear in any other disease, and that the micro-organism, propagated outside of the body through several generations, always produces the same disease, if it gets into the body again. Now that the etiological connection had been proved in this manner in anthrax, tuberculosis and erysipelas, and the resistance of opponents broken, one might confine one's self, in further cases, to the two first lines of proof. This proof had still to be given in the case of abdominal typhus, ague, leprosy, diphtheria and Asiatic cholera, but in the case of the latter, it was already generally assumed that the cholera bacillus was the cause of cholera. As subjects of investigation for the immediate future, Koch designated the question whether the pathogenic bacteria live only in the body, or outside of it, too, and, in the latter case, only occasionally get into the body and cause disease; also the manner of getting into the body, and their demeanor there.

The next advance in bacteriology was the discovery of the poisons excreted by the bacteria, which were now regarded as the cause of death in fatal bacterial diseases, for the opinion that the white blood-corpuscles resist the bacteria was more and more losing ground. Koch then discussed the spore-formation of some bacteria, and the influences of air, warmth, moisture and chemicals on bacteria. Direct sunlight quickly killed

vents fear and screaming in nervous children; 3, there is no disturbance of the jacket while it is "setting;" 4, any country practitioner can make and use this apparatus, and without other assistance than the child's parents can get as good results as an expert can with the Sayre suspension.

A quite extensive practical experience has proven that the above claims are well founded. The comfort to myself, the patient and his friends, and the fact that the patient need not be disturbed during the "setting" of the jacket, would lead me to the use of this method for children in preference to any other.

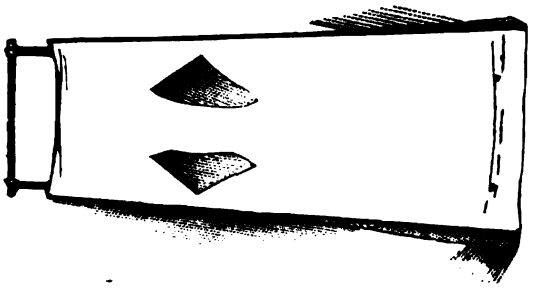

FIG. 2.

If the diseased vertebræ are in the upper portion of the spinal column, so that extension by the head is indicated, this can be brought about by attaching the head support to the cross-bar at upper end of frame.

Permit me to say that Dr. Daniel Brown of this city first suggested to me the use of a frame with a sheet stretched across. The cross-bar for the child's hands, the use of the frame in leaning position, so as to get good extension, and the practical application of it in spinal diseases should, so far as I know, be credited to myself.—Dr. E. Forest, New York, in *Med. Rec.*

ON CHOREA.

The problem of the pathology of chorea has been obscured by at least three circumstances—(1) the refusal on the part of many writers to regard reflex irritation as a possible cause of the malady; (2) the insistence upon its alleged relationship to rheumatism; (3) the assertion that endocarditis is of frequent occurrence in chorea. Not one of these can be justified. Numerous examples of chorea, due to reflex irritation, are scattered through medical literature. It has been shown both by Dr. Gowers and Dr. Sturges that in comparatively few instances is chorea found intimately associated with rheumatism. And, lastly, no evidence has yet been adduced to prove that endocarditis occurs in uncomplicated chorea. It is not surprising to find that the exciting causes of chorea furnish a theme for the expression of the most contradictory opinions No two authors give them alike. "The only immediate cause," says Dr. Gowers, "that can be traced with any frequency is emotion, usually fright, rarely mental distress." Dr. Broadbent, on the other hand, asserts that this influence has been much exaggerated. According to Bristowe, rheumatism, especially when "attended with pericarditis or endocarditis, must be regarded as at least one of the most efficient of the determining causes of chorea." That very few cases, if any, can be referred to this source seems almost certain from the careful investigations of Dr. Sturges; and Dr. Gowers emphatically asserts that "it is impossible to regard chorea as the result of acute rheumatism."

Pregnancy, by almost universal consent, is an occasional exciting cause of chorea. Few writers now consider it simply as a predisposing condition. But with regard to the causal influence of all other forms of peripheral irritation, the greatest difference of opinion exists. Many cases of chorea due to the presence of round worms are recorded by Davaine, Leuckhart and Cobbold also recognize the possible connection between the two conditions. Sir Thomas Watson admits that in some few instances chorea seems to depend on the presence of worms, and advises the administration of oil of turpentine in chorea "whether there be worms at the bottom of it or not." Dr. Tanner speaks of worms as well-recognised causes of chorea. According to Trousseau, on the other hand, they "stand to chorea in a very doubtful relation of cause and effect"; while Broadbent affirms that cases of chorea due to worms "must be extremely rare"; and many writers, among them Bristowe, do not refer to them at all. Rilliet and Barthez ignore a large number of recorded cases, but admit, apparently reluctantly, two cases which seemed beyond all doubt due to worms. Other forms of peripheral irritation—e.g., disorders of menstruation, dental irritation, injury to spinal nerves, head injuries, etc.—are freely admitted by older writers among the causes of chorea. Dr. Gowers, however, attributes the operation of all such solely to the emotional disturbance which is wont to accompany them. Very little, he concludes, is known of the influence of reflex irritation. To Dr. Dickinson, on the contrary, "various forms of irritation, mental and reflex, belonging especially to the nervous system," are one of the two great sources of chorea, the other, in his opinion, being the rheumatic condition. (Quoted from Bristowe, loc. cit., p. 1083.) Still less surprising is it to find corresponding contradictions in the various theories which have been propounded. It is needless to refer to them here. Suffice it to say that each is based upon some one element of chorea to the exclusion of others of equal, perhaps greater, moment; and that consequently none satisfies all

the conditions of the problem of the pathology of chorea.

Before attempting to suggest a new way of viewing chorea, whereby the various symptoms may be correlated and brought into close connection with each other, I would institute a comparison between chorea and another functional disease of the nervous system—viz., migraine. It would seem at first sight that no two diseases could differ more from one another than chorea and migraine, yet on closer examination it will be found that in many points they present strong analogies. The well-marked influence of age on the development of chorea is hardly less striking in migraine, while that of sex is only less so. Hereditary predisposition is potent in both; and the relation, whatever be its nature, of chorea to rheumatism is exemplified in that of migraine to gout. Both diseases are paroxysmal in character, the one "exploding" in pain, the other in motor disturbance, and the symptoms in each case are mainly unilateral. Gastric derangements are common to both, and may be exciting causes. Sensory disturbance, frequent in migraine, occasionally occur in chorea; while motor disturbances, the leading feature of the latter, are occasionally found in migraine, and in both cases display a strong predilection for the more highly developed muscles. Finally, both diseases are prone to recur.

Two principal theories have been propounded to account for the phenomena of migraine. The one regards it as due to a disorder of the cerebral cells leading to secondary interference with the cerebral circulation; the other as due to a primary derangement of the vaso-motor centre. The latter, notwithstanding the arguments which have been brought against it, seems the more probable. I would suggest that a similar explanation may be given of chorea. That the primary change effects the vaso-motor centre, or centres, and that the muscular movements are due to secondary vascular disturbance, interfering with the nutrition of the cortical cells—recent physiology points to the cortex cerebri, not to the corpus striatum as affected in chorea,—thereby rendering them liable to take an abnormal and, as it were, independent action (a predisposition in this direction being assumed); and that, on this hypothesis, all the other symptoms of chorea admit of harmonious explanation is, I think, rendered probable by the following consideration :—

1. As regards the *cardiac phenomena* of chorea. Irregularity and acceleration of the heart's action are better explained on the assumption of deranged innervation than by referring them to some morbid cardiac condition, of which there is no evidence. That a cardiac murmur can be referred to the same source has been denied, although its occurrence in such a disease as exophthalmic goitre can hardly be explained on any other hypothesis. Assuming, however, that cardiac innervation is in some way disturbed in chorea—and early irregularity at least points in that direction,—there is another element present, hitherto, so far as I am aware, unnoticed, which makes the occurrence of a murmur extremely likely. Chorea is a disease mainly of that period of life when the body itself is in a state of growth. In this the heart, like all other organs, shares; but unlike other organs (with the exception of the blood-vessels and the brain), the growth of the various parts of the heart does not proceed *pari passu*. The increase in weight is mainly confined to the ventricles, for the auricles lose in proportion to the ventricles up to the period of completed development of the adolescent, and it is during this very period that chorea mainly occurs; and though it occurs after adolescence, the heart is then rarely affected. That the great strain thrown upon the left ventricle by the excessive muscular movements of chorea, along with irregular arterial action in the cerebral circulation, should result in occasional regurgitation and the development of a murmur seems not improbable.

2. *The respiratory phenomena of chorea.*—Little attention has been paid to the respiratory symptoms which all admit to occur in chorea. They cannot, in every case, be referred to irregular action of the thoracic respiratory muscles. It is much more probable that they, too, are dependent upon deranged innervation, the diaphragm being immediately affected; and, as the respiratory centre is closely connected with that which controls the heart and blood-vessels, there is in and around the vaso-motor centre in the medulla oblongata a focus, interference with which may directly occasion the cardiac and respiratory, and indirectly, the motor and other, phenomena of chorea.

3. *Cessation of choreic movements during sleep.*—This feature is eminently characteristic of chorea, being, in fact, rarely absent. That some change affects the cerebral circulation, prior to the supervention of sleep, is certain; that this change is closely connected with a variation in the blood-pressure is highly probable. One may well suppose that the cessation of the choreic movements is due to the same vascular change, pointing again to their dependence on some affection of the vaso-motor centre.

4. *The effects of treatment.*—It is beyond doubt that the removal of a palpable source of irritation may be followed by speedy cessation of chorea. In all such cases it is probable that the result is due to a decided lowering of the blood-pressure—*i.e.*, to a change originating in the vaso-motor centre. Chorea has also yielded to large doses of chloral. In a well-known case which occurred in Glasgow a choreic patient took sixty grains of chloral, profound sleep verging on coma being induced; but

with awakening there was no return of the chorea. In another case, which also occurred in Glasgow, thirty grains procured the removal of the disease. Several instances have also been recorded where chloroform narcosis brought the affection to an end. That these drugs influence the vascular system is well known. According to Whitla, the action of chloral is directed against the vaso-motor centre, and brings about a fall in the blood-pressure. Sir Thomas Watson records a case where chorea was checked by sudden fright. That in such circumstances the vascular system is strongly affected is in the experience of everyone. The results which have been recorded by Professor M'Call Anderson and others, from the treatment of chorea, by antipyrin point, I think, in the same direction—viz., that irregular vascular action is mainly concerned in the causation of chorea, as also of migraine (against which antipyrin is so potent); the consequent phenomena in each case being determined by the greater or less predisposition of certain cerebral centres, motor, sensory, or psychical, to take on abnormal action.

5. *Post-mortem evidence.*—Dr. Dickinson's investigations go to prove the profound implication of the vascular system in fatal cases of chorea. His comparison of the disease to diabetes loses somewhat of its singularity on the above supposition.

6. *The exciting causes of chorea.*—If it be true that fright is by far the most common excitant of the disease, we have therein another argument for referring the phenomena of chorea to deranged action of the vaso-motor centre. It is highly improbable that its influence is directed against the motor cells, which some assert, as these are not likely recipients of sensory impressions. Through whatever centres such impressions are conducted, it is fair to assume that the resting point is the vaso-motor centre. And with regard to all other forms of irritation, it is just as easy to believe that they affect the same centre as that they act directly on the cells of the cortex cerebri.

Finally, as regards the relationship between chorea and rheumatism, it is to be borne in mind, (1) That there is nothing improbable in the coincidence of the two affections; (2) That rheumatism following chorea presents no difficulties when the *sui generis* nature of the former is considered; (3) That chorea, supervening on acute rheumatism (some other cause operating—*e.g.*, fright), just as it sometimes follows scarlatina or measles, or small-pox, may be explained by the unstable equilibrium of the nervous centres, including the vaso-motor centre, which is so apt to follow on febrile disease. —T. W. Jenkins, M.A., M.D., in *Lancet.*

FISSURE OF THE ANUS AND MASTURBATION.

Dr. A. Grimm says, in the *Cincinnati Lancet Clinic*, September 13, 1890, that the comparative infrequency of fissures of the anus in childhood, and still more the exceptional instances in which these have been known to cause masturbation, prompt the report of the following interesting case.

A female child, not quite eleven months old, was brought to him with a history of masturbation of three months' standing. The child was well developed and, with the exception of a certain degree of anæmia and puffiness about the face, seemed to be perfectly healthy. Before the true nature of the affection was recognized, the mother had often noticed the child while in a state of momentary abstraction suddenly stiffen and relax in her arms. Gradually the symptoms became more pronounced. A certain definite position on the arm was sought; the shoulder of the mother would be firmly grasped, and with flushed face and quickened breath a seesaw motion commenced, lasting till the acme of orgasm was reached. If on the floor, the little sufferer would steady the body with her hands, and inclining towards the right side tightly press the legs together. A jerky to-and-fro movement would now begin, the face, as before, flush, and while groaning and panting, and bathed in perspiration, the orgasm would come on, often followed by a fit of crying or quiet sleep. So entirely oblivious of her surroundings was the child, that neither the presence of strangers nor scolding nor terrorizing could interrupt the action. The attacks would occur from five to ten times a day, but never during sleep. The physician who had first been consulted ascribed the symptoms to the possible presence of pin-worms; but anthelmintics proved of no avail.

An examination of the genitalia revealed a slight swelling of the labia majora and a good deal of redness of the introitus vaginæ, with increased moisture. As all symptoms referable to the rectum, such as painful defecation, bloody stools or constipation, were absent, the treatment was directed towards allaying the apparent hypersensitiveness of the vaginal tract. Bromide was ordered internally, and cocaine in solution and salve applied externally. Though the vehemence of the symptoms seemed to abate somewhat, a cure was not effected.

At this juncture Dr. Forcheimer was called in consultation. A careful examination of the genitalia was made, but the findings were pretty much the same as before decribed. Passing, however, his hand over the anal region, an induration was distinctly felt, and on forcibly opening the anus several linear fissures were seen just within the sphincter. Success seemed now insured, and a

favorable prognosis given. Most authors agree that anal fissures in children are more amenable to treatment than the same affection in the adult, and the heroic measures so frequently necessary in the latter are hardly ever called for in the former. Weak solutions of nitrate of silver and light touching with the solid stick of nitrate were employed, the parts were always kept well smeared with an iodoform salve and the bowels maintained in a soluble condition. But the fissures would not heal. At last, disgusted with the ineffectual results of this method, surgical interference was advised and accepted. Dr. E. W. Walker was called in consultation and practiced division of the sphincter. An iodoform tampon was daily introduced into the rectum by means of the speculum, and in two weeks the ulcers healed and masturbation was no longer indulged in.

At this period the child was, unfortunately, taken ill with chicken-pox. Not only was the skin studded with the characteristic vesicles, but the mucous membranes of the mouth and pharynx also partcicipated in the eruption. The disease had scarcely subsided when the child resumed the former practice of masturbation. An inspection of the anal region revealed the same, if not a worse condition than before, and with out further temporizing, Dr. Walker was again called to divide the sphincter. The fissures healed as kindly as in the first instance, and with their disappearance masturbation also ceased. In searching the literature, Dr. Grimm was unable to find a parallel case. The *American Journal of Obstetrics*, vol. ix, 1876, contains the report of a case of masturbation, by A. Jacobi, in a female child nine months old. In this instance, however, the practice became established through a state of chronic constipation.

The remarkable features in the case just presented are the age and sex of the child, the severe measures that had to be adopted for the cure of the fissures, the entire absence of rectal symptoms, and, lastly, the rekindling of the disease during or immediately after an attack of chicken-pox. As regards the latter point, Dr. Grimm is inclined to believe, rare though it may be, that an eruption similar to the one existing in the mouth also invaded the rectal mucous membrane, and in this manner reproduced the pathological condition.—*Med. and Surg. Rep.*

THE BEGINNINGS OF JOINT DISEASE IN CHILDREN.

It daily becomes more evident that in the young, joint disease finds it primary origin either in the synovial membrane or in some portion of bone which enters into the articular surface of the joint and rarely ever begins in cartilages or ligaments, which are only secondarily implicated. The relative frequency with which the various joints are affected by disease thus beginning, as against that originating in other neighboring structures, is of much importance, and generally it may be stated that the greater the area covered by the synovial membrane, the more frequently is it the site of commencement of disease, if we except the hip-joint. The apparent exception in the case of this hip-joint may be due to its anatomical peculiarities, the extent of the surface being not really large, the ligamentous union so firm and the movement so limited, that it is efficiently protected from injury. The bones of this joint ossify from one center at a much later period than that at which joint disease is most common, and are thus less liable to disease, and the membrane becomes less liable to injury. In reviewing the various joints *seriatim*, we find that a large proportion of cases in the surgical wards are described as diseases of the metacarpal bones either at the shaft or the distal extremity, involving of course the metacarpophalangeal joint, and in this instance, at least, we may lay it down as a fact that joint disease commences invariably at the end of the bone. Disease of the metacarpal bones, like disease of the wrist, is much less common in childhood, probably on account of its greater proximity to center of circulation or to its greater immunity from injury. But coming to the ankle, we have all the elements which predispose to the advent of disease—extensive synovial membranes, large proportion of cancellous tissue, and a large amount of active growth going on in epiphyseal ends of the tibia and fibula, besides the great liability to injury of these parts in the early efforts at walking. Hence we find that disease of the tarsus is of very frequent occurence in children, and rapidly spreads to other parts. If we include all elements of the tarsus, the liability becomes greater still, and it is easy to understand when once the synovial membrane is implicated, that the other bones with which it is in contact will also speedily be involved. The origin of Chopart's amputation is due to this fact. But disease of any of these bones may not infrequently be recognized and dealt with early with the help of antiseptics, and the envolvement of other parts avoided, but when once the synovial membrane is affected, amputation is hard to avoid, and generally the sooner it is performed the less is the danger of implicating other tissue. Disease of the astragulus is of great consequence to neighboring structures, and caries of the bone can scarcely fail to involve either the ankle-joint above, or the calcaneum or scaphoid below ; hence the scant success that attends partial operations. The cuboid offers a greater chance of arresting disease by means of scraping or ablation of the bone. In disease of the scaphoid, partial operation is disappointing. Syme's operation is not now performed so frequently, because of all the

bones of the foot, the os calcis is most frequently diseased, and can be treated more readily than any of the others, and the whole of the *materies morbi* erradicated with satisfactory results. I have occasionally noticed one condition which occurs in the surroundings of this joint, and of no other, and that it is the very slight amount of implication of the ankle, notwithstanding the very distinct clinical appearances of much more serious disease. I believe that there occurs in the loose cellular tissues about the ankle a turbercular deposits, independent of bone or synovial disease, which may, however, spread to one or both of these structures. In one case of this kind, where amputation had actually been recommended, the disease disappeared on opening the abcess under strict antiseptics and carefully applied rest, leaving only an extremely small scar, which reminded me of those tubercular nodules found on the buttocks, the thigh, and occasionally on the arm, involving a large area of inflammation, which gradually breaks down and leaves a scar so minute as almost to pass without observation.

THE GALVANIC AND FARADIC ELECTRICAL TREATMENT.

Prof. F. Raymond, of the Paris Faculty of Medicine, employs the galvanic and faradic electrical treatment in the following manner, especially in the treatment of muscular atrophy. Muscles can be treated by either the galvanic or faradic electricity. If the faradic current is employed while the muscle is in communication with the conductors, this particular muscle undergoes a series of rapid contractions; while, on the contrary, if the galvanic current is applied, only two contractions are obtained, one when the current is opened, the other when it is closed.

Hence for the stimulation of the contractility of muscular fibres, the faradic current is the one to be recommended; and the mode of applying this faradic current according to what we desire to obtain, either local faradization or a generalized one. The localized faradization has for its object to act on an individual muscle; it is either direct or indirect.

Direct faradization is to influence the muscular substance directly. For this purpose the two moist electrodes are placed on the external integument corresponding to the muscle to be electrified; the dry electrodes are only to be used when the superficial integuments are to be influenced.

Indirect faradization is used to obtain a contraction of the muscle through the intermediary of the motor nerves which supply it. One electrode is to be applied at any indifferent part, while the other, the active electrode, is to be placed in a region where the nerve trunk which is to be influenced passes superficially. Each local Faradization must be continued for ten minutes at one seating.

Generalized faradization, on the other hand, has for its object, to act on all the peripheral nerves. The patient is placed on a chair, with his bare feet resting on a stool presenting the form of an inclined plane. This inclined plane is covered with a plate of iron or copper, which is separated from the patient's feet by a piece of moist flannel. This plate is in communication with the fixed pole of an induction electrical apparatus; the other pole terminates in a wire brush, or a wet sponge, which is to be applied to the different regions of the body, beginning at the back of the neck, applying the brush especially on the painful spots and regions corresponding to the first, second and seventh cervical vertebræ. It is then carried successively to each side of the back, on the chest, abdomen, and especially in the epigastric region (on account of the solar plexus), the upper and lower extremities, and finally, the head is faradized, using here the hand as an electrode. Each sitting ought to last about fifteen minutes, and be divided as follows: one minute for the head, four for the neck and cervical region; three for the back; three for the abdomen; and four for the extremities.

In the treatment of muscular atrophy due to a spinal lesion, anterior polyomyelitis, or progressive amyatrophy, we must act at the same time upon the central lesion and the peripheral alteration of muscles. To restore the contractility of muscular fibres faradization of the involved muscles must be recommended; while, on the contrary, to combat the spinal lesion and to act favorably on the nutrition of the anatomical elements and tissues, we must resort to galvanization of the vetebral column.

The galvanization is to be done by applying the positive pole at the back of the neck, and the negative one in the lumbar region. This is kept up for two minutes; when the poles are reversed, positive in the lumbar region and negative in the back of the neck. Two or three sittings a week are to be recommended. In acute anterior polyomyelitis, or in lesions of recent occurrence, galvanization must be kept up for from two to four minutes. In spinal lesions, of slow progression, the electrical treatment is to be kept up longer. In recent cases the treatment must last from six months to one year; in old cases two treatments of three months' duration are called for yearly.—*Cor. Med. and Surg. Rep.*

Dr. Charcot thinks that about one person in 100,000 is susceptible to the influence of hypnotism.

A CLINICAL STUDY OF RHEUMATISM.

In the daily clinic at the University of Louisville it has fallen to my lot to prescribe for a great many rheumatic cases, and they have been especially numerous during the last two years. This paper is meant to call attention to some therapeutic points, and therefore, I will not allude to the symptoms and signs, or duration, etc., of rheumatism, but simply call attention to the effects produced by the use of different drugs. In the acute form no other drug has given such satisfaction as is generally obtained with salicylic acid.

In the sub-acute variety, salol often acts nicely; while, again, a combination of salicylate of sodium and acetate of potassium succeeds where the salol has seemed to fail. Generally, up to a month or so ago, I have used the salol in too small doses, and since larger ones have been used, the results have been better.

In chronic rheumatism, and in those migratory pains hard to classify, I have been watching the effects of the individual member of the mixture; first alone, then in pairs, and lastly, the combination which is given below.

By the assistance of Mr. Samuel Meyer, the efficient druggist of the University Dispensary, the mixture has been relieved of its most disagreeable taste, and its powers really improved. The prescription is as follows:

R.—Sodii salicylatis, . . .	
Potassii iodidi, ...	āā 2 dr.
Potassii acetatis, . . .	
Ext. cascara sagrada, fl., .	
Glycerini, ...	½ oz.
Aquæ cinnamomi, . . .	
Aquæ menthæ pip. q. s., . .	ad 3 oz.

M. ft. sol. Sig.—Teaspoonful every four hours.

It has been a clinical observation with me that the majority of chronic rheumatics are likewise the subjects of chronic constipation. Giving but a moment's thought to the subject, one must see the advantage of this combination. The anti-rheumatic and general alterative powers of the three first ingredients are so well known that it would be wasted time to speak of them individually, but it has seemed by combining them we obtain more than four times the effect that we generally obtain from any one of them by itself.

Now, with reference to the chronic constipation, in glycerine and cascara we have a combination producing very pleasant, gentle, but usually sufficient laxative effects. It has been our custom to vary the amount of cascara according to the needs of the case. If the bowels should be very obstinate, increase the amount of the cascara, while if, on the other hand, they acted with little assistance, we diminished the quantity.

A short report of one case will illustrate the subject for us:

One of the class at present attending the University, consulted me some two weeks ago. He complained of chronic rheumatism, and incidently remarked, "I have been practicing medicine for fifteen years, and in the last month, or six weeks, I have tried many things to relieve my trouble, but they all failed."

In a general way, he stated that he took salicylic acid until he used up three hundred grains—salicin and salicylate of sodium each until he had consumed a hundred grains. Becoming anxious he consulted me. He was put upon this mixture, and in forty-eight hours began to feel benefit from it, and now, at the end of two weeks, he is confident that a little longer use of it will relieve him entirely.

To those laboring with any chronic rheumatism I would urge a trial of this anti-rheumatic mixture, believing it will serve them well.—Ewing Marshall, M.D., in the *Practitioner and News.*

MEDICAL NOTES.

The following preparation is said to be excellent for *chapped hands, lips,* etc. Dissolve boric acid, one part, in glycerin, twenty-four parts. Add to this solution lanolin, five parts, free from water, and vaseline, seventy parts. The preparation may be colored and perfumed.

A very successful injection in *gonorrhœa* is said to be obtainable by adding a one per cent. solution of creasote in decoction of hamamelis, combined with boric acid. It is claimed that this mixture will destroy the gonococci in two hours.

For *ozœna,* Cozzolini (*Prov. Med. Jour.* Aug., 1890) recommends the following powder for insufflation:

R.—Salol, ...	ʒ ij.
Acid. boric., ...	ʒ j.
Acid. salicylic., ...	gr. xij.
Thymol, ...	gr. v.
Talc pulv., ...	gr. iij.—M.

Dr. C.M. Fenn, of San Diego, California, writes as follows to the *University Medical Magazine,* August, 1890, in regard to the employment of bisulphite of soda in *tonsillitis and coryza*: I can testify to the prompt effect of bisulphite of soda in aborting many cases of tonsillitis and coryza, not only from personal experience, but also from the observation and treatment of others. At the first onset of an attack, recognized by rapid enlargement of the tonsil and difficulty of deglutition, I prescribed a saturated solution of the salt (the English preparation is to be preferred), and endeavor to saturate the patient therewith as soon

as possible. To be more exact, I would suggest tablespoonful doses of the solution every hour or two for twelve hours, after which the intervals may usually be increased to three or four hours for a similar period, or, perhaps, twenty-four hours. It is seldom necessary to continue the remedy beyond forty-eight hours. If tonics now seem to be indicated, a mixture of bark and iron, with a little chlorate of potash, will supplement the treatment very nicely.

Dr. Mackintosh (*Omaha Clinic*) suggests the following ointment as almost a specific in *eczema*:

℞.—Bismuth, subnitrat., . ʒ iv.
Zinci oxidi, . . . ʒ j.
Acid. carbolic. liquid, . ♏ xxx.
Vaselin, alb., . . . ʒ ij.—M.
Fiat unguentum.

Or—

℞.—Bismuth, subnitrat., . ʒ iij.
Zinci oxidi, . . . gr. xxx.
Glycerini, . . . ʒ iss.
Acid. carbolic. liquid., . ♏ xx.
Vaselin. alb., . . ʒ vj.—M.
Fiat unguentum.

The latter ointment mixes into a beautiful enamel-like cream, which is cooling, and acts as a balm to the irritable skin. When constant tingling and irritation disturbed the patient's rest at night, the following lotion is said to be valuable:

℞.—Bismuth, subnitrat., . ʒ j.
Glycerini, ... ʒ iv.
Acid. carbolic. liquid., . ♏ xij.
Aquæ rosæ, . q. s. ad ʒ j.—M.

Sig.—Shake up, and apply with a camel's-hair brush.

Dr. Thomas More Madden, F.R.C.S., Ed., read a paper before the Obstetric Section at the late meeting of the International Congress, in which he reported a plan employed by him in a very large number of cases of cystitis in the female treated in the gynæcological wards of the Mater Misèricordiæ Hospital, Dublin. It consists firstly in the full dilatation of the urethral canal with the instrument exhibited, so as to paralyze the contractility of the sphincter vesicæ and canal, and thus produce a temporary incontinence of urine; and, secondly, in the direct application through the same instrument of glycerine of carbolic acid to the diseased endo-vesical mucous membrane. Any pain thus caused may be prevented by the previous topical application of a solution of cocaine. The procedure recommended seldom requires to be repeated more than once or twice at intervals of a week or ten days; and combined with the internal use of boric acid, rarely fails to effect a rapid cure in any ordinary case of cystitis in the female.—*Coll. and Clin. Rec.*

HYPODERMIC TREATMENT OF ASTHMA.

Miss E. M., 25 years old, born in Ireland, dressmaker, contracted a severe cold at the age of thirteen, by bathing her feet in a cold stream of water while menstruating for the first time. She was confined to bed for nearly six months suffering with cough, shortness of breath and amenorrhœa. Her menses gradually reappeared, but remained scant and painful. Her asthma occurred frequently and continued until she was eighteen years old, when, under the advice of her physician, she emigrated to America, where she seemed to improve for about two years. After this time, however, her health began to decline gradually, and the asthma returned with greater severity. She returned to Ireland, staying there one month without relief and again come to this country, after which I saw her for the first time and treated her with indifferent success. Last January she had a severe attack of influenza, and, after convalescing from this, her asthma was decidedly worse. On June 9, 1890, she was bedfast, with her general health much impaired, and with marked loss of weight. Her appetite and digestion were poor, and pulse rapid and weak. There is no albumin in her urine. Loud sibilant rāles were heard over the whole chest. Her family history shows that her father, sister and brother and her uncle and grandfather on her father's side were sufferers with asthma.

At this time I gave her morphia sulphate $\frac{1}{3}$ of a grain, and atropia sulphate $\frac{1}{100}$ of a grain, and ten grains of antyiprin, with ten drops of tincture nux vomica every four hours, with favorable results; but after giving her this treatment for four days I decided to place her on hypodermic injections of strychnine and atropine, as recommended by Dr. Thomas J. Mays, in the *Medical and Surgical Reporter*, April 12, 1890. All other treatment was discontinued, and she received $\frac{1}{30}$ of a grain of strychinine, and $\frac{1}{100}$ of a grain of atropine every other day for two weeks. On account of the profound dryness produced by the atropine, even in small doses, it was then omitted, and the strychnine in the same doses was continued alone until October 1, since which time she has been taking $\frac{1}{30}$ of a grain of strychnine and two grains of Vallette's mass three times a day.

She has been free fom asthma for three months, and has gradually but steadily improved. She weighs more than she ever did, and loses no sleep or rest at night; she has a good appetite, and is able again to attend to her business, which she had been forced to relinquish. By October 24, she had gained twenty-three pounds in weight.—Dr. Higbee, in *Med. and Surg. Rep.*

NOTIFICATION OF INFECTIOUS DISEASE AND MISTAKES IN DIAGNOSIS.

The practice of notification to the health authorities of all cases of infectious disease with their immediate isolation is obviously of such great value as a prophylactic that it is becoming almost universal. In England, the optional act, which only came into force less than a year ago, has been voluntarily adopted by authorities which have jurisdiction over about 12,000,000 of people. This, with the compulsory act applied to London, and with those fifty-six towns, or localities, which had previously obtained powers of compulsory notification by special local acts, makes compulsory notification now practiced with respect to about 20,000,000 of people. In Canada, we learn that the practice is generally very fairly carried out. A few fines for neglect, in certain places, have been imposed. With the tremendous gain to the public conferred by this practice, great responsibility is thrown upon medical practitioners, especially from possible mistakes in diagnosis. Some practitioners in the United States have encountered actions for heavy damages from mistakes in this way, and there has been some serious trouble of a like kind in this country. Such mistakes are liable to occur to almost any physician, especially without the utmost skill and care. According to Dr. Russell, medical officer of Glasgow, of 1,499 consecutive cases admitted to Belvidere Hospital as suffering from infectious disease, 114, or 7.6 per cent., did not suffer from the disease which they were supposed to have when they were sent in; and of that 114, no fewer than 85, or 57 per cent. of the total cases, had no infectious disease at all, and ought not therefore to have been removed.

There are two principal remedies for the troubles to practitioners liable to arise from errors of this kind in the practice of notification. First, physicians, wherever the practice is enforced, or carried out, should insist on having provided, in connection with the isolation hospitals, observation wards for the reception of cases of doubtful diagnosis. Physicians have generally "taken kindly" to this practice of notification for the public good, and the least the public can do is to afford this protection, where possible; and it could usually be made possible. Such provision obviously provides also for the public safety, and it is little short of criminal neglect when such wards are not provided.

The other remedy we will but merely name: It is better facilities for the study, and closer study by students at the schools, and even by physicians at post-graduate schools, of clinical cases of infectious disease, in order that the greatest skill may be brought to bear on diagnosis. This is strongly urged by Dr. Russell.—*Canada Health Journal.*

The Treatment of Dysentery.—Mr. George Harris, M. R. C. S., L. R. C. P., London (in joint medical charge, Simla), writes: I wish to bring before the profession the treatment of acute dysentery with large doses of ipecacuanha powder which has been deprived of emetine. I have of late used this powder in many cases of dysentery, and have been much pleased with the result, and, what is more, my patients have been saved the disagreeable nausea, vomiting, and depression which have usually, in my experience, followed large doses of ipecacuanha given in the usual way, and which ill-effects, I have no doubt, were attributable to the continued emetine. Messrs. Symes & Co., of this town, have fully worked out my idea, which I have had for the past ten or twelve years, namely, that it would be a great boon to suffering humanity if it could be found that the emetic property of ipecacuanha was not necessary, or essential, to its curative power in dysentery, and that, if it could be extracted without rendering the drug inert, it would be a great gain in the treatment of dysentery.

I have no doubt that the leading manufacturing chemists in England, and other places, could readily manufacture the same powder, and supply it for experimental purposes. Hitherto, as far as I can ascertain, it has been generally assumed in therapeutic works that all the good effects of the powdered root were due to the large proportion (varying from 10 to 16 per cent.), of emetine contained in it. At present, I am not in a position either to positively affirm, or deny this assumption, but it is open to question, inasmuch as the therapeutic properties of the other ingredients have not, as far as I can ascertain, been worked out either at home or abroad, and I have found, by practical experience, that the removal of the greater portion of emetine has not taken away from the power of ipecacuanha to cure dysentery. I am in the habit of giving my powder in full doses of 20 grains twice or thrice daily, according to the severity of the cases, and, as I am not absolutely certain that all the emetine has been removed, I advise my patients to be careful about taking food, either before or after taking the powder. So far, I have found that the new powder causes little or no nausea, and that the patients are far more comfortable, and not depressed at all, and that all the dysenteric symptoms rapidly disappear, the griping pain and tenesmus lessen rapidly, the stools become less frequent (become purulent and bilious), and the blood and mucus rapidly disappear.

My cases are far too few to enable me to dogmatize, or generalize at all, but I would ask for an extended trial, and I hope that others will find it —that is, the new treatment—as successful as I have. If it be found, on further trial, that ipecacuanha powder, completely deprived of emetine, is

inert in dysentery, then it will be proper to set about and give the pure emetine in fractional doses ($\frac{1}{100}$ to $\frac{1}{50}$ grain, according to Martindale), and combined in such a way as to obviate the nauseating effect without in any way lessening the therapeutic effects. I would here suggest a trial of the gallo-tannate of emetine in irritable cases of dysentery, as, according to Watts, it is neither emetic nor poisonous. If, on the other hand, it is found by others that the curative principle of ipecacuanha powder *qua* the treatment of dysentery is not the emetine, then the unfortunate sufferers from dysentery in India, and elsewhere, will not, as in the past, have to undergo the misery of large doses of the ordinaay ipecacuanha, in addition to the tortures of his disease. Those who have suffered from both will readily appreciate this.

I may add that the cephælic acid is at first removed, but subsequently re-mixed with the powder after removal of the emetine. It is well known that vin. ipecac. after a time becomes inert, and deposits a sediment; is this sediment gallo-tannate of emetine, which, as above stated, is neither emetic nor poisonous, or is it an analogous ipecacuanhate of emetine?—*Br. Med. Jour.*

CORRELATIONS OF THE SEXUAL FUNCTIONS AND MENTAL DISORDERS OF WOMEN. — Barnes (*Med. Press*) thus concludes a paper on this subject:

I may conclude this imperfect presentment of a great theme by stating what seems to be the logical sequence of the facts and arguments set forth.

The proposition I present is, indeed, self-evident. All the resources of medicine, special and general, should in every case be brought to relieve the sick. This implies that similar direct objective investigations as that which is pursued in the case of females suffering from sexual disorder not apparently complicated with nervous disorder, shall be made in the subjects of nervous disorder in whom there is reason to infer that sexual derangement exists.

In the first place, there is the immediate indication to seek for light as to the cause of the nervous disorder, with a view to relieve this complication. In the second place, even if the nervous disorder be found not to depend upon the sexual disorder, it is still the duty of the physician to do what he can to relieve the sufferer from this element of trouble. An insane woman has surely as much right to relief from disease of the ovaries and uterus as a sane woman has.

Griesinger (1867) speaks very decidedly upon this point. He says: "On the least suspicion, a local examination should be made. It is certainly of great detriment to the patients that there exists amongst the asylum physicians a truly childish delicacy in regard to vaginal examinations. In Germany, France and England, I have found the same delicacy; they seem to be afraid of exciting the patients." This was said in 1867. I think the censure may now be considerably modified.

One rule I strongly urge. In every case of puerperal insanity examine into the condition of the pelvic organs. Imperfect involution of the uterus is in the highest degree probable. In addition to other factors the functions of the breasts are almost always suspended. Thus a most potent stimulant to involution is wanting. Then retroversion or retroflexion is very probable. Relief from these conditions cannot fail to be beneficial, and may even bring about recovery.

Thus we see that in this inquiry the physiologist and the gynæcologist meet on common ground, each enlightening the other; and both helping to build up out of the materials of their special knowledge that true science, that comprehensive medicine which holds out the best prospect for the relief of physical and mental suffering.

INTESTINAL ANTISEPSIS.—To render innocuous the pathogenic organisms of the intestines, attempts have been made with drugs administered by the mouth or rectum. By the first method only those remedies are indicated that will pass through the stomach unchanged. Calomel is an agent of this class, but while serviceable in simple fermentative conditions, it is impracticable in infection of long duration. Bouchard has used large quantities of pulverized carbon in typhoid fever; naphthalin, iodoform, and salicylate of bismuth have also been recommended. These agents possess a certain antiseptic influence on the contents of the alimentary canal, but on the intestinal wall their action is *nil*, which fact receives confirmation in the treatment of typhoid fever. The intestinal antiseptics require heroic administration, and, aside from toxicity, they are absorbed in the stomach and altered in their chemical constitution before attaining the desired site. For this reason Cantani considers their exhibition per rectum as the proper method. Repeated experimental investigations show that intesinal irrigations may pass the valve of Bauhin and reach the upper part of the small intestines. The advantages arising from rectal injections are the use of large doses, direct action, and avoidance of gastric irritation. There are also other advantages attending this method. The use of cold water reduces the temperature; whereas hot water is of benefit in cholera. Thorough lavage of the intestines is also attained and a certain quantity of bacteria and ptomanies are mechanically removed. Cantani considered carbolic acid and tinnic acid to be the best intestinal antiseptics. Corrosive sublimate exerts no antiseptic action, owing to its union with albumin. Tannic acid fulfils a double indication for rational intestinal antisepsis; it paralyzes the vegetative activity of the bacteria an renders the ptomaines innocuous. The value o

tannic acid in effecting the objects already mentioned has received abundant clinical proof in the treatment of intestinal catarrh accompanied with fermentation and true specific dysentery. If the injections of tannic acid prove too irritating, then the addition to the injection of about one litre of oil is of advantage. In typhoid fever these injections are of great value; meteorism and diarrhœa disappear, and the entire course of the disease is favorably influenced. In the incipiency of this disease, it is possible by injections of tannic acid to abort it. Cantani has also secured an abortive action in the beginning of typhoid with injections containing one gramme of the hydrochlorate of quinine, and from ten to fifty grammes of pure carbolic acid in two litres of cold water.—*Med. Rec.*

THE PROPHYLAXIS OF DIPHTHERIA.—At the recent International Congress the subject of the measures to be taken in averting the spread of diphtheria was discussed in the section of hygiene. An admirable survey of the subject was given by Professor Loffler of Griefswald, whose researches upon the diphtheria bacillus are so well-known. The paper concluded with several propositions (*Berliner Klin. Wochensch.*, No. 40), which may be briefly summarized. The cause of diphtheria is held to be a bacillus, which contained in the exudation on the affected mucous membranes, is liable to be disseminated in the vicinity of the patient, together with particles of the false membrane. The infectivity of the patient may even persist for a few days after all traces of diphtheritic exudation has disappeared. The strictest isolation of cases is necessary; and children who have suffered from the disease should be kept from school for at least four weeks. The bacilli have been found to retain their vitality in dry membranes for from four to five months. It is therefore essential that all clothing, bed linen, and utensils likely to have been contamined should be disinfected, either by boiling or by exposure to steam. The room occupied by the patient should be disinfected by washing the floors with warm sublimate solution (1 in 1000), and cleansing the walls and furniture with bread. It is uncertain how long the bacilli may exist in the moist state, but it seems probable that moisture is more favorable to their vitality than dryness. Thus, diphtheria would seem to be favored by the dampness of dwellings, and also by absence of light. These organisms can exist outside the body at a temperture of 20° C., and they develop well in milk. The sale of this commodity should therefore be carefully supervised. An important statement is that which asserts that the diseases affecting pigeons fowls, calves and pigs, which resemble diphtheria, are not caused by the bacillus of human diphtheria These diseases in the lower animals are not therefore, to be feared as sources of the human affection. Professor Loffler thinks that the etiological identity shown by Klein to exist between diphtheria in cats and in man requires confirmation. Although lesions of mucous membranes favor the retention of the virus, yet in disposed subjects the disease may arise apart from such lesions. It is advised that when diphtheria is prevalant a systematic use of disinfectant gargles and washes (e.g., sublimate solution, 1 in 10,000) should be enforced on all children. Lastly, it is stated that the metorological conditions which favor the spread of the disease are still unknown. —*Lancet.*

TREATMENT OF TYPHOID FEVER.—Irvin, in the *American Practitioner and News*, contributes a paper on typhoid fever, the summary to which we quote as an example of the extreme slowness with which new ideas penetrate the professional mind. Scarcely one of his propositions is tenable, and the resort to opium for every emergency reads like one of the "Tales of a Grandfather." We quote:

1. There is no medical treatment for an uncomplicated case of typhoid fever.

2. Diet and stimulants carefully regulated to suit the case, and good nursing, fulfil all the indications.

3. The fever is best controlled by frequent sponge baths of tepid water and alcohol, and the internal use of stimulants and opium.

4. Feeble heart and prostration from hemorrhage or diarrhœa are relieved by opium, stimulants, belladonna, and oxygen gas.

5. Pneumonitis and bronchitis are not influenced by special medication. Food and stimulants, with opium to relieve cough and pain, and quinine in tonic doses may be given.

6. Hemorrhage of the bowels requires the free internal use of opium only.

7. Perforation of the bowels is only successfully treated by the use of opium.

8. Peritonitis requires the use of opium in repeated doses.

9. Tympanites is most successfully relieved by the use of opium internally three or four times daily, with turpentine applied to the abdomen.

10. Diarrhœa is controlled by opium and the regulation of food.

11. Insomnia yields best to the use of opium; where this drug is not well borne codeine paraldehyde or urethan may be given.

12. Nephritis should be poulticed locally and opium given internally to relieve pain.

13. Constipation is best relieved by mild laxatives and enemata.

Retention of urine requires the use of the catheter only.—*Times and Reg.*

PROF. KEEN gave this table to the Jefferson Medical College class, as of use in making the differential diagnosis of the following varieties of tumors:

ENCEPHALOID.	SCIRRHUS.
1. Soft, elastic, not uniform.	1. Hard and inelastic.
2. Rapid growth, large size, adhesions early.	2. Slow growth, small size, late adhesions.
3. Pain slight and wandering; after ulceration severe and fixed.	3. Pain early, sharp fixed and lancinating.
4. Veins enlarged.	4. Veins slightly enlarged.
5. Ulcerations deep, foul, undermined and bleeding.	5. Ulceration deep, edges hard and abrupt.
6. Glands involved early.	6. Glands involved late.
7. Occurs at any age, usually before 45th year.	7. Usually occurs after 40th year.
8. Occurs most frequently in the breast, testicle and uterus.	8. Breast, uterus, stomach
9. Death occurs in from 9 to 12 months.	9. Death in from 9, to 18, to 36 months.
10. If in breast there is no retraction of nipple.	10. There is retraction of nipple.
11. Family history is bad.	11. Family history is bad.

SARCOMA.	ADENOMA.
1. May be soft and fluctuating, or hard.	1. Soft and elastic.
2. Growth irregular, adhesions early.	2. Slow growth, no adhesions.
3. Very little pain until ulceration takes place.	3. Pain very slight and neuralgic; menstrual if tumor affects the breast.
4. Veins slightly enlarged.	4. Veins normal.
5. Ulceration sooner or later quite deep.	5. No ulceration.
6. Rarely, if at all, involved	6. Glands never involved.
7. Occurs in adult middle life, 20th to 40th year.	7. Occurs from 20th to 30th year, usually.
8 Connective tissue anywhere.	8. In breast or other glands.
9. Death occurs early or late simply a matter of time.	9. Never kills.
10. No retraction of the nipple.	10. No retraction of nipple.
11. Family history good.	11. Family history good.

—*Coll. and Clin. Record.*

CANCER AND SMOKING.—Since the death of President Grant, a constant smoker, cancer of the tongue and cigar smoking have been closely associated in the public mind. A "prominent American physican," whose name has not transpired, is reported to have said lately: "The only cases of cancer of the tongue that I ever saw were of persons who never smoked. The majority of them were women and, the half-dozen men who were afflicted were not confirmed smokers at all." This apocryphal utterance is contrary to current opinion. There are no statistics that show clearly the relative liability of smokers and non-smokers to cancer of the tongue, for there are no data showing the relative numbers of smokers and non-smokers in any country. Surgeons of experience, however, find that the disease is far more frequent in persons who have been in the habit of smoking. The disease appears to be about six times more common in males than in females. The effection known as "smokers patch" is common; a good description will be found in Mr. Butlin's *Disease of the tongue.* It is slightly-raised oval area on the forepart of the tongue, a little to one side of the middle line, just where the end of the pipe rests or where the stream of smoke from the pipe or cigar impinges on the surface of the tongue. The patch is usually red but it may be bluish or pearly-white. It lasts for years, but tends to spread over the surface of the tongue if the irritation be continued. When diffused in this fashion, it constitutes leucoma of the tongue. Leucoma is certainly a predisposing cause of cancer. There is, however, no evidence to prove that smoking is the sole cause of leucoma, nor do the majority of cases of leucoma become cancerous. Hence if smoking predisposes to cancer, it is only in an indirect manner. The smoker should never leave a "patch" untreated and should avoid rough mouthpieces and brands of tobacco which cause irritation of the tongue.—*N. Y. Med. Jour.*

MR. HUTCHINSON'S TREATMENT OF RINGWORM.—Mr. Jonathan Hutchinson gives, in his *Archives of Surgery*, the prescription upon which he has "settled down in tolerable content" for the treatment of ringworm, after having tried a great variety of remedies without equal satisfaction. He relies chiefly on chrysopanic acid. He orders as a wash for the scalp one drachm of Wright's liquor carbonis detergens to the pint of hot water. Twice a week the scalp should be well washed with this, and all scales and crusts should be removed. The hair is cut close or shaved. The chrysophanic-acid ointment contains a drachm of chrysophanic acid, twenty grains of ammoniated mercury, a drachm of lanoline, six drachms of benzoated lard, and ten minims of liquor carbonis detorgens. This ointment is to be rubbed in more or less freely, according to its effects, night and morning, or latterly every night only. The cure will be slow probably, and the secret of success consists in the patient continuance of the same remedy. To those who persevere he promises recovery; it is only the impatient who are disappointed. He has no faith in the rapid cure of ringworm.—*N. Y Med. Jour.*

REMEDIES FOR NEURALGIA.—Writing to the *Prov. Med. Jour.* regarding the use of new syn-

thetic remedies, Dr. T. P. Thompson states that antifebrin is infiintely a more effectual pain-reliever than antipyrin, the dose is small, and it is not very expensive. Three or four grains in a little brandy or whiskey, and then a little water added to this mixture, is the best way to give it. Repeat in four honrs if necessaay. Dr. Thompson has never witnessed any bad depressing effect from the employment of antifebrin. In neuralgia of the head it gives sure and speedy relief. In any given case of nerve pain where one might suspect a weak or fatty heart phenacetin is to be preferred to antifebrin, but it does not seem to act quite so surely as the latter. Phenacetin in seven or eight grain-doses every four hours is a safe and effectual remedy in all neuralgias, be they in head, back, or any other part of the body. Exalgine he has also found useful, and quite corroborates Professor Fraser's statements regarding its efficacy.—*Chemist and Druggist.*

EARLY SYMPTOMS OF GENERAL PARALYSIS OF THE INSANE.—1. Fatigue after slight exertion is often the earliest symptom noticed by the patient, and is a valuable sign if noticed in connection with other suspicious symptoms.

2. Temporary aphasia is by no means uncommon as an early sign, but it must be understood that transient attacks of aphasia without apparent cause are not always followed by general paralysis. Closely related to this sign is a change in the handwriting; some patients alter their mode of holding the pen or cease writing altogether a year or more before the disease is distinct.

3. Sudden and slight attacks of loss of power or sensation, causing a man to drop whatever he may have in his hand, are frequent.

4. Neuralgia, headache, and rheumatic pains almost invariably occur a year or more before the disease declares itself.

5. Changes of temper and character are probably the most constant of all the changes which are noticed early in the disease.

The author concludes with the advice that in a patient with a history of syphilis or of injury to the brain, do not neglect early fatigue, fainting or other fits, loss of smell, vague optic disk changes, unusual headaches, neuralgia and sciatica, and change of character—Dr. Savage, *Brit. Med. Jour.*

ANÆSTHETIC SPRAY.—Dr. B. W. Richardson states that a solution of five grains of carbolic acid in five ounces of ether used as a spray is an excellent local anæsthetic. The anæsthesia produced appears before the skin is hardened by the cold—an advantage in cutting operations. If deep incisions are required a continuance of the spray upon the tissues causes very profound anæsthesia, and dissection can be continued without pain. The anæsthesia has the additional advantage of being more prolonged than that produced by other local anæsthetics, and there is little or no pain after reaction has taken place. The disadvantages of this spray are that in some instances the wound heals slowly and by granulation, leaving an ugly scar; and that in a very large wound there is danger of carbolic-acid poisoning. Dr. Richardson recommends use of the spray chiefly in cases of ulcerating cancer with pain and an offensive discharge. —*London Med. Rec.*

THE PREDETERMINATION OF THE SEX OF OFFSPRING.—Herr G. Herz, in a contribution to the German archives of scientific and practical veterinary surgery, on the possibility of predetermining the sex, gives an elaborate review of the numerous theories of the sexual differentiation, from which it appears that we are still entirely ignorant of the cause of such difference. He enlarges on the theory of Fiquet, which is also favored by his own experiments. Mr. Fiquet, a cattle farmer at Houston, in Texas, had observed that the sex of the young was usually that of the weaker parent. He produced for experimental purposes a marked parental difference by a certain system of keeping and feeding his cattle. If he wanted a bull calf he gave the cow plenty of particularly nourishing fodder, while the bull was given far less fodder, and that of inferior quality, and was made to serve the largest possible number of cows. If on the contrary, he wanted to produce heifers, he fed the bull well and allowed him no chance of serving other cows but those on which he wanted to experiment, and which were kept on poor fodder. Mr. Fiquet says that he was successful in thirty-two cases, and Herr Herz verified the theory by experiment of his own on goats, which gave the same results as Mr. Fiquet's experiments on cattle. —*Lancet.*

A MODIFICATION OF ROMBERG'S TEST IN THE DIAGNOSIS OF LOCOMOTOR ATAXIA.—In a recent Bordeaux thesis, summarized in the *Gazette Hebdomadaire de Médecine et de Chirurgie*, Dr. Perron describes a modification of Romberg's test by which he has been enabled to diagnosticate locomotor ataxia in its incipiency. The patient is directed to stand on one leg and close his eyes; if he cannot keep his balance, the inference is that he is affected with a spinal lesion that will ultimately give rise to locomotor ataxia. As ordinarily employed, Romberg's test often fails in cases that are not far advanced.—*N. Y. Med. Jour.*

STANLEY'S recent Emin expedition was equipped entirely with Fairchild's digestive ferments in preference to any others, and in the recent attack of gastritis, from which Mr. Stanley suffered, he was entirely sustained upon foods previously digested with Fairchild's extractum pancreatis.

THE CANADA LANCET.

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AGENTS.—DAWSON BROS., Montreal; J. & A. MCMILLAN, St. John, N.B.; GEO. STREET & Co., 30 Cornhill, London, Eng.; M. H. MAHLER, 23 Rue Richer, Paris.

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THE ADVANCE OF THEORY IN MODERN MEDICINE.

Whether or not the clinical skill of the present generation of medical men, even the oldest of them, is greatly in advance of that of their professional fathers and grandfathers, there can be no doubt whatever as to the advance of recent years in theoretical knowledge of physiological and pathological processes. Extracts from the third edition of the Encyclopedia Britannica, published in 1797, may be interesting reading now, from their archaism, and may serve as fixed points from which to "triangulate" our progress within the past century. The reader may remember that individuals not a few, must yet be living, who were assisted in their entrance into this cold world by the writer of the article on Medicine in the volume referred to. How vastly the microscope and clinical research have improved our knowledge may be seen in the following paragraph, still tainted with the Galenian theory of "humors." "It is certain, indeed, that the blood in a state of health, has some small share of acrimony, and this acrimony from certain causes may be a little increased so as to produce various diseases of a dangerous nature. This we are assured of from the increase of motion in the heart and arteries, and the similar augmentation of the action of the secretory organs, from acrid substances taken inwardly. The same thing also appears from the unusual acrimony of the secreted fluids in such cases, by which the vessels are sometimes greatly stimulated, and sometimes even quite eroded. Very many acrid substances, however, are daily taken into the stomach, so that these must either be corrected in the *primæ viæ*, or changed by digestion before they pass into the blood; or at least by dilution with much water, or being blunted by an admixture with gluten, oil, or inflammable air, they must deposit much of their acrimony, and at last be thrown out of the body as noxious substances."

Probably the physician does not live who is not many times discouraged at the apparent failure of his contest with disease. In his hours of "blueness" let him ponder the almost impassible chasm between the theories then obtaining in physiology and the ætiology of disease, and a triumph such at Koch seems really to have scored at last, which, by the way, he is reported to attribute more to the microscope-makers than to himself.

In treatment, too, the physician of a century ago lacked not in boldness and decisiveness of action. A case of hydrophobia was treated as follows:—"With this view a large tub of cold water, well saturated with common salt, was prepared, into which the poor boy was plunged overhead and ears, and there held until he ceased to struggle. He was then taken out again, and the same operation repeated until he became so quiet that the doctor was under apprehensions that a total extinction of life would take place. He was then wrapped up in a blanket and put to bed, and he remained more quiet than he had formerly been; but all his former restlessness returned, his pulse sunk, and he died about two o'clock in the morning." Now read Pasteur, any pessimistic physician of to-day. The article on Nymphomania is truly quaint. After a list of remedies somewhat alarming in their heroism—blood-letting, cooling purges, camphor in 20 grain doses or more, opiates as in mania, intra-*uterine* injections of barley-water, "with a small quantity of hemlock juice," the author naively adds: "This is called *specific*," but matrimony if possible should be preferred. The cure for *Tænia Solium* would certainly induce the obnoxious cestode to change his quarters with expedition. After very stringent fasting, and the drinking of sundry broths and infusions, the patient is to take two or three drachms of powdered root of male fern, and if vomiting occurs, another; then, two hours after,

a bolus of "panacea of mercury 14 times sublimed, and select resin of scammony, each ten grains; of fresh and good gamboge six or seven grains in a conserve. To be taken twice, and washed down with one or two dishes of weak green tea, after which the patient must walk about his chamber."

The article entitled Menses could have justice done to it only by a paper on the bibliography of the whole subject from D Graaf and Boerhave down to Galabin, Playfair, and the late lamented Duncan.

Hypotheses of all kinds are suggested, some refused, others left *sub judice;* the influence of the moon, the supposed offending quality of the blood, the flux being regarded as an excretion, the need of extra blood supply in women for the exigencies of gestation, so that menstruation was the result of a plethora, "women having this plethora, and not men, because their bodies are more humid, and their vessels, especially the extremity of them, more tender, and their manner of living more inactive than of men; and that these things concurring are the occasion that women do not perspire sufficiently to carry off the superfluous alimentary parts till they be accumulated in such quantity as to distend the vessels and force their way through the capillary arteries of the uterus. It is supposed to happen to women more than to the females of other species, because of the erect posture of the former, and the vagina and other canals being perpendicular to the horizon, so that the pressure of the blood is directed towards their orifices; whereas in brutes they are parallel to the horizon and the pressure is wholly on the side of those vessels."

The chief opponents of the theory of plethora, maintained the theory of a special ferment, the famous De Graaf being one of the latter school. Some of them went so far as to say that the bile was the ferment in question, and explained the absence of the phenomena of menstruation in men on the ground that "the pores of the latter are more open and carry off more of the serous part of the blood, which is the vehicle of all the other humors." Their non-appearance in brutes is because of "the pores of these being manifestly more open than those of women, as appears from the quantity of hair which they bear, for the vegetation whereof a larger cavity, and a wider aperture of the glands is necessary than where no such thing is produced."

The histology of the above would surely pluck any freshman guilty of it now-a-days.

THE REPARATIVE PROCESS IN THE HEALING OF WOUNDS.

(Continued from Nov. Number.)

The epidermis also proliferates at the *rete malpighii*, and joins across the line of incision with a similar proliferation from the other side; microscopic section of the wound shows no clot, no fibrin (which glues surfaces together for the first twelve hours, or so, but is soon absorbed), but only a layer of fibro-blasts so delicate that frequently the microscope soon fails to detect any scar tissue at all. The old theory, that this rapid and complete union was due to microscopically accurate coaptation of parts, so that the severed capillaries returned, lumen to lumen, as before, and, as it were, fused together again, is, of course, quite untenable. The view that the connective tissue of the scar is of connective tissue origin, that is, that fibro-blasts are never formed from leucocytes, is fully in accord with the law of the specific nature of tissues, that no cells of any one of the three blastodermic layers can produce a tissue peculiar in origin to either of the other two. The process "essentially consists in a growing together of the two edges by the production of the requisite materials from the old tissues of the part." It is thus a reversion to the old embryonic type of tissue and method of growth—large, soft, round, nucleated masses of protoplasm in a state of rapid proliferation, which, being of connective tissue origin, cannot, according to the law of the specific nature of tissues, and our present theories of "embryological predestination," produce any but fibrous connective tissue; so that, in a scar, special tissue cannot be reproduced, but only cicatricial tissue formed.

1. *Healing by the First Intention*—Surfaces not so well coapted, but no suppuration, or putrefaction. A little lymph, or blood-clot, between them, which must be penetrated by the growing fibro-blasts, leaving cicatrix thicker than before, but still linear in section. Vessels are not needed, as in granulation tissue, and so, are not larger, or more numerous than normal, as in this form of union there is vascularity enough for nutrition of

fibro-blasts. The exuded lymph and fibrin form a temporary means of union, but, in forty-eight hours, or so, they soften and liquefy; the corpuscles grow fatty and granular, and disintegrate, and the whole is absorbed by the lymphatics of the part. Keeping sight of the real process of healing, which is set up in forty-eight hours, or so, we see two preliminary stages: (*a*) Lymph and plasma exuded, perhaps in quantity sufficient to soak bandages, giving surfaces a glossy, sticky look; (*b*) In 24-36 hours, surface has a dull, grayish film covering it, consisting of lymph-corpuscles imbedded in a granular nidus of precipitated fibrin and albumin. Then (*c*), in forty-eight hours, or so, the real process of healing is set up. The connective tissue surrounding the fatty, or sarcous elements in the wound is found to be soft, swollen and homogeneous, while the nuclei are actively dividing and giving origin to fibro-blasts, which a little later are found wandering in the adjacent healthy tissues, and into the blood and lymph clot of the wound, along with the leucocytes which have escaped by diapedesis. The exuded matter in the wound is a foreign body, does not organize, and must be got rid of before true organization and permanent union can go on. "The union of the wound, therefore, in healing of the first intention, is brought about by the reproduction of new connective tissue and epithelium from the old tissues of the like kind."

2. *Healing by Granulation*—In this variety, the cause of the delay in healing as compared with either of the preceding, is the presence of a still larger mass of tissue which must be removed before the healing agents, the fibro-blasts, can fix themselves in place and proceed to maturity. Hamilton teaches that the granulation is not nature's best method of healing, but a necessary evil, delaying healing and causing great waste of albumin and leucocytes, as well as the death and casting off of far more new tissue cells in the pus than would otherwise be necessary. He holds that the granulating tuft since it contains no fibro-blasts, contains no organizable matter and must be wholly removed before healing can begin. This is a necessary corollary from his view that the capillary tuft in granulation tissue is a morbid dilatation of pre-existing vessels from lack of natural support by the injured tissues. Healthy granulations approach most nearly to the natural undilated state of the capillaries and are therefore small. Even an open wound may be made to heal without granulations and therefore much more rapidly by pressure and strict antisepsis; the pressure preventing the bulging of the capillary loops by resisting the heart's expulsive action.

3. *In healing by union* of two granulating surfaces as seen in union of flaps in amputation, the coapting of the flaps causes pressure sufficient to limit the growth of granulations, so that from pressure of the growing layer of fibro-blasts underneath they atrophy and allow the fibro-blastic layer on each side to come into contact. These layers soon cohere by the interlacing of their spindling fibro-blasts, just as healing by the first intention.

4. *In Healing by Scabbing*—The only departure from type, is that the scab, consisting of desiccated exudation, fat, blood, and epithelial cells, forms a natural shield, preventing access of external irritants such as micro-organisms, and therefore suppuration; preventing also by its pressure the formation of granulations, so that the epidermis is free to extend laterally beneath the scab more rapidly than if granulations had been allowed to form.

LIGHT IN THE SICK ROOM.

Most of us can remember the days when it was the almost universal custom to shut patients up in dark, close, stuffy rooms, irrespective of the disease from which they were suffering. I call to mind the funereal aspect of sick rooms I visited as a child, and the impression produced was not an agreeable one. There are, of course, some maladies, in which the admission of light is prejudicial to the patient, but even oculists are now taking their patients out of the dark chamber at the earliest possible moment, fully appreciating the benefit upon the system generally, and, therefore, upon their special territory of the sun-light. Of the Weir-Mitchell treatment nothing need be said. It is a special form of treatment for special purposes, and when intelligently carried out, is undoubtedly potent for good. But it is just possible that many of us practising physicians are not careful enough about the arrangement of the sick-room. In the houses of our more wealthy patients the *trained* nurse, that inestimable boon to the

medical attendant, will look after the ventilation, tidiness, light, etc., of the chamber. But with our poorer patients do we not sometimes neglect to duly impress upon the friends and attendants the importance of plenty of light; of the removal of soiled clothing, etc.? Old prejudices die hard, and there is no doubt that many an old-time nurse shuts her patient up and starves her by withholding light and air, in spite of the doctor's directions, and much to the patient's disadvantage. How often do we, on entering the patient's chamber, have to make the request, "pull up the blinds," or "open the shuters," before we can even get a sight of our charge; and when the light is admitted, how often do we find a condition of things that could hardly be tolerated if the light was freely admitted all the day long—Dust, soiled clothing, dirty dishes, half-eaten portions of food, untidy bed, dirty medicine glasses, *et al ad infinitum*; and all of which had been concealed by the friendly (?) darkness. In a word, the patient's environment is entirely unsanitary. Not only is this true, but sunlight—a powerful restorative, is denied the patient. It need not be said that the patient "cannot bear the light." The bed can be so arranged that the direct rays of light need not fall upon the patient's face, though even that would be in all cases less an evil than enshrouding him in darkness, and, in the great majority of cases, positively beneficial. Light in the room will have a tendency to make the dirt flee beneath the hands of the attendant. Sunlight diffused through rooms clarifies and warms the air. It has a cheering and beneficial effect upon the sick, and an influence upon the minute organic poisons; "the best disinfectant we have," which is altogether in favor of the patient.

It is not necessary to refer to the difference in appearance, health, vigor and tone between the inhabitants of crowded cities and those of country districts, to the town-made child and the country one, to the cellar-bred children, with their rickets, struma, physical and moral deformities. All this we have known from our youth up. Why then should we deny the sick the benefits of the life-giving sun? The blue-glass treatment, craze though it was, undoubtedly did some people good, simply by their exposure to the sun's rays. In theory we accept the doctrine of revivifying powers of sunlight, but do we always in practice act up to it, and insist upon its free admission to the chambers of our patients? Dr. Richardson was undoubtedly right when he said that the first words of the physician or surgeon on entering the dark sick-room should be the dying words of Goethe, "More light, more light!"

RECENT GRADUATES.

At the recent examination held by the Ontario Medical Council, the following gentlemen passed the final:

Jos. Bedard, Kingston; T. C. Baker, Merrickville; E. F. Boure, Toronto; J. C. Bell, Strathroy; A. C. Beatty, Elizabethville; A. S. Bueglass, Bright; J. W. Cunningham, Hespeler; C. W. Clendenan, Toronto; D. A. Coon, Elgin; W. D. F. Ferguson, Rocklands; F. Guest, London; E. P. Gordon, Rosedale; W. E. Zimby, Goodwood; J. J. Gee, Fisherville; A. J. Harrington, Toronto; J. F. Hanley, Waubaushene; Emily J. Irvine, Brampton; E. F. Irwin, Newmarket; C. P. Jeuto, Brockville; Geo. L. Liddell, Cornwall; R. H. Mason, Barrie; R. McGee, Collingwood; C. J. Patterson, Ottawa; R. W. Rooney, Shelburne; J. A. R. Robinson, Brampton; A. H. Speers, Merton, Ont.; F. H. Sherk, Berlin; A. M. Spence, Harriston; J. L. Smith, Monck; G. H. Webster, Preston; H. Welch, Cook's Mills.

The following candidates passed the primary examination:

F. K. Armstrong, Glanford; Robt. Archer, Burketon; J. G. Burrows, Napanee; E. F. Boure, Toronto; Jas. Bedard, St. Eugene; Annie E Carveth, Leskard; G. H. Cooke, Chesley; P. J. Clune, Wooler; J. W. Edgar, Hamilton; W. D. F. Ferguson, Rocklands; Fred. Guest, London; R. J. Gardiner, Kingston; J. J. Harper, Rosemont; A. C. Hunter, Newcastle; A. E. Henry, Mono Centre; T. A. M. Hughes, Ilderton; W. J. Johnston, Carleton Place; R. M. Mitchell, Shrigley; W. S. Morrow, Halifax, N.S.; H. J. Way, Toronto.

EXOPHTHALMIC GOITRE.—At the New York State Med. Association, Dr. E. D. Ferguson speaking of exophthalmic goitre, said (*Med. Rec.*) that until about two years ago he was unable to give little encouragement to patients with exophthalmic goitre, and he had tried all methods then recommended, including drugs, as digitalis, etc., and electricity. It was with reluctance, therefore, that in the fall of 1887 he undertook the treatment of a woman with exophthalmos, enlargement of the thyroid, and change in the pulse. Under

the treatment, which included tonics, electricity, digitalis, etc., tried several months, she grew so much worse as to be confined to bed. It then occurred to the writer that the rapid forcible, occasionally tumultuous, action of the heart would favor the idea that increase in the resistance of the systemic arteries was one of the features; and as digitalis increased tension, it was concluded that was the reason it failed to quiet the heart's action.

Strophanthus was said to lessen the arterial tension; consequently he tried this. The woman was then unable to walk, had painful sensations in the præcordia; was emaciated in an extreme degree, yet relief soon became manifest; the pulse went down, the patient became able to take a fair amount of exercise, and finally she became symptomatically cured, and the prominence of the eyes and size of the thyroid diminished.

He had since tried strophanthus on eight other cases, with marked benefit in all except one, in which there was accompanying pulmonary trouble, probably tubercular. He had no explanation except that the strophanthus relieved the overtaxed heart by overcoming resistance in the systemic circulation. He had employed the tincture in increasing doses, but care should be taken to obtain a good quality. Only recently had he seen mention of strophanthus in ophthalmic goitre in medical literature.

Papoid in Gastric Catarrh.—There are several drugs that have distinct remedial effects in this affection (*Times and Register*), especially rhubarb and ipecacuanha in minute doses, which have the property of stimulating the gastro-intestinal glands to secretion; but the stomach should first be freed from the viscid mucus that it contains by using hot water with alkalies, to be taken an hour before meals, the drug following in about fifteen minutes. If the secretion of mucus be profuse, the oxides of zinc and of silver are of value, being alterative and astringent.

But there is another agent representing another and entirely different principle, that of *coaxing* the organ back to its duty in a similar way to that in which pepsin does in dyspepsia. The agent is papoid, a powerful digestant which will begin the work of peptonizing albumin in an alkaline medium. And, after the formation of peptone is commenced, and when the natural stimulus—food, has caused the secretion of the gastric juice, the pepsin simply continues the process until completed. It may be given in two to five grain doses, with a grain of potash or soda, and a minute amount of ipecacuanha, or rhubarb.

If the secretion of abnormal mucus in the stomach is excessive, it is well to give the hot alkaline water half an hour before meals, and the papoid immediately after meals; but, in most cases, this is unnecessary, as the papoid itself quickly rids the stomach of mucus.

Antimony in Local Inflammations.—Surgeon-Major E. Lawrie, in the *Practitioner*, relates his experience of the treatment of local inflammations by small and frequently repeated doses of antimony. He has found that, in this way, all inflammations not dependent upon a specific or septic cause, can be arrested. More particularly he instances the great benefit which antimony produces in the mucous enteritis of children; and he also found it extensively serviceable in cases of typhoid fever. He states that it cuts short the fever when all other remedies fail. No depressing effects on the heart's action was observed as long as the drug was not pushed so far as to cause nausea, and diarrhœa; and if considered desirable, it may be combined with cardiac tonics.

Capillary Bronchitis.—A favorable formula for the administration of carb. ammonia to children, even infants, is the following:—

R—Ammoniæ carb.,	. . . . .	32 grains.
Mucil. acaciæ	. . . . .	1 ounce.
Syr. semplic,	. . . . .	1 ounce.

M. Sig.—One teaspoonful every hour, two or three hours, according to graveness of the attack.

In the capillary bronchitis of children, which is often so alarmingly fatal, the formula in teaspoonful doses every thirty or sixty minutes, in cases where suffocation is threatened, will be found a specific.

A Boy's Essay on Breath.—Breath is made of air, writes a Kentucky school-boy. If it wasn't for our breath we would die when we slept. Our breath keeps the life agoing through the nose when we are asleep. Boys that stay in a room all day should not breathe. They should wait till they

get out doors. Boys in a room make carbonicide. Carbonicide is poisoner than mad dogs. A heap of soldiers was in a black hole in India, and a carbonicide got in that black hole and killed nearly every one afore morning. Girls kill the breath with corsets that squeezes the diagram. Girls can't run or holler like boys because their diagram is squeezed too much.

The following is an excellent salve for the relief of hæmorrhoids :—

℞.—Muriate cocoaine, ... gr. xx.
Morph. sulph., ... gr. v.
Atropiæ sulph. . . . . gr. iv.
Pulv. tannin, ... gr. xx.
Vaseline, ... ℥i.
Ol. rosæ, ... qs.

M. Sig.—Apply after each evacuation of bowels. Of course, contents of bowels should be kept in soluble condition.

Agaricin.—Few practitioners appreciate says (*Technics*), the exceedingly great value of agaricin as a remedy in night-sweats, especially those of phthisis. The most profuse sweat is checked almost by magic with a single dose. It operates by diminishing thirst and increasing the secretion of the urine. The dose may be pushed to the extent of one grain in the course of twenty-four hours. The single dose for an adult is from one-eighth to one-fourth of a grain.

In three cases we have made use of Wampole's Solution of Cod Liver Oil, where neither the plain oil, nor the emulsions could be borne. In all these cases the solution was taken without difficulty, and showed itself by its effects to be a powerful nutritive tonic; building up the patient much as the oil does when it is relished. One boy has taken the solution for some months, and his mother remarked to-day, "He has never been so well as during this winter."—Extract from *Medical Times*, Feb. 15, 1889.

A. Rothrock, M.D., McVeytown, Pa., says: I have prescribed Aletris Cordial in a case of threatened miscarriage. The woman had had three miscarriages in five years. Some six weeks ago, she being in her fifth month of pregnancy, was attacked with hæmorrhage, bearing down pains, and all other symptoms of threatened miscarriage. I prescribed Aletris Cordial, which subdued the hæmorrhage, bearing down pains, and all nervous symptoms that foreboded the old trouble, and at this time, she promises fair to go to full term.

Heart Tonic.—According to Dr. Delafield, of the College of Physicians and Surgeons, New York, the very best combination of remedies so far suggested for the relief of a weak heart, and dilated heart, is :

℞.—Potass. iodide, ... gr. v.
Fl. ex. digitalis, ... ♏ ij.
Fl. ex. convallaria majalis, . ♏ xx.—M.

Sig.—For a dose repeated after each meal.

Digitalis strengthens the action of the left ventricle, and convallaria that of the right. To his suggestion we may add that when, by continued use, these remedies appear to be losing their effect, belladonna added to the prescription will, through its influence on the respiratory centre in the medulla, again lead to marked, and more or less continued improvement.

Anæmia and Chlorosis.—Dr. Wm. Goodell is in the habit of prescribing the following mixture of the chlorides in the above diseases :

℞.—Hydrag. chlorid. corrosivi, . gr. j-ij.
Liq. arsenicalis chloridi, . . f. ℥ j.
Tr. ferri chloridi.
Acidi mur. dil., ... āā f. ℥ iv.
Syrupi simplicis, ... f. ℥ iij.
Aquæ q.s., ad., ... f. ℥ vj —M.

Sig.—℥ ij. in a wineglass of water after meals.

Herpes Circinata.—For tinea circinata cruris, or the so-called eczema marginatum, the best of all remedies (*Med. Mirror*), is the local application of the following, to be continued for some time, and gradually diluted as the disease disappears :

℞.—Acidi pyrogallici, . . . ℥ j.
Iodine, ... ℥ iv.
Acidi carbolici, ... ℥ ij.
Ol. amygdal amari, . . . gtt. v.
Alcohol q.s., ad., . . . f. ℥ vj.—M.

Sig.—Apply locally with camel's hair brush, daily.

Prof. Koch's Articles.—We beg to call attention to the articles on pp. 102 and 103, in connection with the widespread interest now manifested in Prof. Koch's alleged discovery. The

daily press is deluging the people with cablegrams which it would require a *savant* to understand, and the people read and wonder. In the two articles referred to is to be found all the reliable information on the subject yet made public.

OZÆNA.—In ozæna the following is sometimes useful (*Med. Mirror*):

℞.—Salol, ... ʒ ij.
Boric acid . . . . . ʒ ij.
Salicylic acid, ... ʒ ij.
Thymol, ... ʒ ss.
Powdered talc., ... ℥ j.
Sig.—Use as an insufflation.

DIARRHŒA IN CHILDHOOD.—For a child one year old give:

℞.—Kennedy's Ext. Pinus Can.
(dark), ... 3 drachms.
Acid nit. mur., ... 5 drops.
Syr. orange peel, q. s. ad., . . 2 oz.—M.
Sig.—Teaspoonful every two or three hours.

ARISTOL OINTMENT.—The following formula is recommended by Eichhoff (*Br. Jour. of Derm.*):

℞.—Aristol, ... 3 to 10 parts.
Vaseline, ... 30 parts.

The ointment is said to be not less efficacious than chrysarobin in psoriasis, and to have the advantage over the latter in that it does not stain the skin, or irritate. It is well, after applying the ointment, to cover the part with a protective, or rubber.

BRITISH DIPLOMAS.—The following Canadians have received the L. R. C. P. and S. E., and L. F. P. and S. G., examination held at Edinburgh, G. A. Ings, G. Wright, E. H. Féré, D. Archer. J. T. Rogers, and W. E. Almas.

PRURITIS.—A drachm each of camphor and chloral hydrate rubbed together, and added to an ounce of rose water, is highly recommended as a local application for pruritis in any part of the body.

Flint says: "I have never known a dyspeptic to recover vigorous health who undertook to live after a strictly regulated diet, and I have never known an instance of a healthy person living according to dietetic system who did not become a dyspeptic.

EN ROUTE FOR BERLIN.—Prof. Ramsay Wright, of Toronto University, has taken passage for Berlin, to grapple with the scientific aspect of Prof. Koch's lymph. Dr. Thorburn, jr., who had recently returned from Germany to Canada, has also gone to investigate the subject both scientifically and clinically. Dr. Winnett has also gone to swell the numbers, waiting like pilgrims round an ancient shrine, at the feet of Koch.

THE Civil, Military and Naval Departments of the British Government are supplied with the Fairchild digestive products, and the Fairchild preparations for the pre-digestion of milk, etc., are especially preferred in India.

AT a recent meeting of a Scottish doctors' club, a philosophical member propounded the question: "When may a man be said to be within himself?" The answer that found acceptance was: "When he is confined in his bowels."

A CASE of leprosy has been discovered (*Med. and Surg. Rep.*) at Chester, Pa., by Dr. Frank Evans, the diagnosis being confirmed by Drs. Daland, Pepper and Duhring, of Philadelphia. The patient has been isolated.

The medical practitioners of London have lately organized a medical society. Dr. Moorehouse, president; Dr. Drake, treasurer; and Dr. Campbell, secretary. Drs. Waugh, Wilson, and Meek form a committee on by-laws.

Books and Pamphlets.

THE ESSENTIALS OF MEDICAL CHEMISTRY AND URINALYSIS. By S. E. Woody, A.M., M.D., Professor of Chemistry and Public Hygiene, and Clinical Lecturer on Diseases of Children, in the Kentucky School of Medicine. Third Edition. Philadelphia: P. Blakiston, Son & Co., 1890.

A cursory glance shows this very convenient little work to have much to recommend it, especially as a manual for laboratory work. It contains nothing but the essentials, and is distinctly meant for the medical student. The author almost dips into the Socratic system of dialectics in the manner in which he strings together the source, preparations, pharmacology, toxicology with symptoms and treatment in case of poisoning, and tests,

for each of the important metals. The tables of tests for both metallic and acid radicles of compounds in aqueous solution are singularly compendious. Organic Chemistry has devoted to it only a few pages, and the third part of the work, on Urinalysis, is a really excellent summary of the subject, shorn of all "padding." The illustrations are excellent, both of apparatus and microscopic specimens. The author makes a curious apology for his little work, in his preface, in which he practically acknowledges the evil, which he regards as for the present at least irremediable, of substituting for more exhaustive text-books, books of the quiz-compend style, which favor cram and put a handicap upon intelligent study.

SAUNDERS' QUESTION COMPENDS, No. 15. ESSENTIALS OF THE DISEASES OF CHILDREN. By Wm. M. Powell, M.D., Physician to the Clinic for the Diseases of Children in the Hospital of the University of Pensylvania, etc., etc. Philadelphia: W. B. Saunders, 1890.

Assuming for the moment that the quiz-compend is a desirable thing, the text-book just named has perhaps more to recommend it than most of its class. It seems to be thoroughly abreast of the times, in pathology and treatment especially, and though the subjects of diet, hygiene, nursing and kindred matters, are kept largely in the background, the text-book is very systematic and concise, in its discussion of the important diseases of childhood. The subject is alike important and neglected by medical students, and if the brevity and conciseness of the 200 pages should induce more study of the subject by undergraduates the author will have done the public a service. The typography is good, and the literary style of the book fair.

A TEXT-BOOK OF COMPARATIVE PHYSIOLOGY, for Students and Practitioners of Comparative (Veterinary) Medicine. By Wesley Mills, M. A., M.D., D.V.S. With 476 Illustrations. New York: D. Appleton & Co., 1890. Cloth, pp. 636.

This is an excellant work, and one which has been long needed. There has been, until within the last year, no work in English of the character of the present, and the veterinary student has been compelled to study the subject through the medium of works on human physiology alone. The work is very complete and we may say that rarely have we met with a scientific writer who possesses in so large a degree the power of making himself perfectly understood and that in the most pleasing manner. The work should become a classic and we believe it will. The cuts are excellent and numerous; the book will be found of value by all who desire a concise manual of comparative physiology. Veterinary students and practitioners can not afford to be without it, and we are sure the work will be of more than passing interest to the medical man generally.

THE PHYSICIAN'S VISITING LIST FOR 1891. Philadelphia: P. Blakiston, Son & Co. Toronto: Carveth & Co.

This old favorite is again before the profession. Among other useful contents may be mentioned a list of poisons and antidotes revised for 1890—a dose table re-written for 1890. List of new remedies for 1890. Notes on disinfectants. Examination of urine. Table for calculating the period of gestation, etc., etc. The work is a very valuable pocket diary to the physician and surgeon, in addition to being an excellent and handy means of keeping account of each day's work. The prices vary from $1.00 for 25 patients per week to $2.00 for 100 patients per week. There in an interleaved edition costing 25 cents extra.

THE MEDICAL NEWS VISITING LIST FOR 1891—Copyrighted and published by Messrs. Lea Brothers of Philadelphia.

This pocket-sized physician's visiting list is a well and neatly gotten up little book, bound in soft leather. It is published in four styles: weekly for 30 patients per week; monthly for 120 patients per month; perpetual for 30 patients per week for a year, and perpetual for 60 patients per week for a year. The perpetual lists are undated, the others are dated for 1891. It is one of the best arranged thumb-lettered visiting lists that we have seen. This little pocket-sized wallet besides containing all the necessaries of an ordinary visiting list has 31 pages of printed matter of value to a visiting physician, with an erasable tablet, catheter scale, etc., etc.

THE CANADA LANCET is published from the office of Messrs. Dudley & Burns, 11 Colborne St., Toronto, to whom application for rates, etc., may be made.

LANCET.

ANAL OF

GICAL SCIENCE,
ND NEWS.

FEB., 1891. [No. 6.

munications.

IN PRACTICE.

M.R.C.S. ENG., TORONTO.

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complained of pain
in right chest. At this point, corresponding to lower portion of scapula, very harsh vesicular breathing. Patient, who never had sputum, now had 100 c. c. purulent nummulated sputum, but, in eight preparations of large slides, no bacilli.

Nov. 23rd.—Temp. normal; resp. normal. Found dulness at this point, corresponding in area to size of palm of hand. This dulness did not reach to base of lung, and over it were found small crepitant râles.

24th.—She has less cough, and no more sputum; dulness less intense, râles still audible.

25th.—Reaction on nose lessening, since lung changes less evident. 0.010 injected. In morning temp. was normal. Dulness gave way to tympanitis; râles only occasional. At no time did we hear bronchial breathing. 3 p.m.—Rigors; resp. 60; pulse 138; temp 38°. Extreme constitutional disturbance. Renewed cough and expectoration of same purulent character. 12 p.m.—Temp. 40°; dyspnœa less; pulse 120.

26th, 9 a.m.—Temp. 38.5°; resp. 42; feels better. Reaction continued till 6 p.m. 6 p.m.—Dyspnœa; resp. 68; temp. 36.5°; pulse 110. Moist râles appeared at base of right upper lobe. Dulness is again increased, but not so marked, and complains of cardialgia. This time there is bronchial breathing. Lupus of nose shows swelling, but not equal to first injection.

27th.—Bronchial breathing; distant and near crepitation occasionally. Dulness giving way to tympanitis.

30th.—Dulness no longer present; no râles found.

Dec. 2nd.—0.005 c. c. injected at 10 a.m. 4 p.m.—Resp. 60; expectoration renewed, slight dulness at angle of right scapula. 9 p.m.—Temp. 39.3°; resp. 68; occasional râles at right apex. No bacilli found.

3rd, 8 p.m.—Temp. normal; resp. 72. Headache; pain in larynx, which showed redness of inter-arytenoid fold. No ulceration to be seen; vocal cords normal. Exanthema, resembling measles, appeared over the whole back, with a few reddish spots on abdomen. Nose less swollen. In nostrils, little ulcerations near external opening, covered with white epidermis, appeared. Complains of extreme lassitude.

5th.—No signs of exanthema. Pleuritic friction felt at right scapular region, reaching to side

of thorax. Has some expectoration, but in four specimens found no bacilli.

6th.—At left base of uvula a patch appeared, showing a whitish membranous covering, which was thrown off in two days, leaving an ulcer which was healed by Dec. 5th.

8th.—0.003 c. c. injected, and no rise of temp., but resp. 64. Pain in larynx; upper surface of right arytenoid body swollen more than left, but no change in color, or ulceration. Tendency to cough; no sputum. Slight constitutional disturbance.

10th.—0.003 c. c. injected. Temp. normal; resp. normal. Night sweats absent; feeling of a cold in nose. Pains renewed in right base.

12th.—0.005 c. c. injected. No reaction, and temp. pulse and resp. normal. Limbs weak.

Weight.—Before treatment, 105 lbs.; after first, second and third injections, 97 lbs.; during last ten days, with small reactions, 99 lbs. No albumen in urine; spleen always normal.

Dec. 15th.—0.005 c. c. injected. No reaction.

17th.—0.007 c. c. injected. No reaction.

REMARKS.—This patient has every indication of a permanent cure being effected.

1890. CASE II.—Painter, æt. 24. Mother died of pneumonia, tubercular; father died of consumption; one brother alive and healthy. As a child, had typhoid fever, measles, scarlet fever; never had scrofulous glands. Present trouble commenced in Sept. of this year, with cough and expectoration. At end of Sept., hæmoptysis (a cupful); end of Sept., for fourteen days, complains of night sweats, chills in evening, and fever. Present complaints are cough and pain in chest on deep inspiration. Strongly built, good muscular system, face flushed, skin brownish, and slight indication of lead line. Pulse regular, 72; appetite and thirst normal; tongue coated, liver normal size, thorax well built.

Supra and infra clavicular fossæ of left side give, on percussion, a shorter and higher note than on right side. This is also the case in supra and infra spinous fossæ on left side. Behind from body of seventh vertebra on left side, percussion note is shorter than on right side.

On auscultation, left anterior apex, bronchial respiration. Below clavicle, anteriorly on left side, soft bronchial breathing, with numerous small sized râles at height of inspiration. Behind, on left side, evident pleuritic friction, particularly from seventh vertebra downwards. Breathing at this point is weaker than on right side. Heart normal. Vital capacity 2000 c. c. Tubercular bacilli in large numbers.

Nov. 6th.—Small ulceration on left arytenoid body, inner side.

10th.—Percussion note, left apex, shorter. Left supra spinous fossa, bronchial breathing and râles. In left supra and infra clavicular fossæ, soft bronchial inspiratory breathing, and not very numerous râles. Post. left lower lobe still shows shorter percussion note and weaker vesicular breathing than right side. During all the time observed (Oct. 13 to Nov. 18) had night sweats only twice.

18th, 8 a.m.—Injected 0.002 c. c. 6 p.m., temp. 38.6°; 7 p.m., temp. 39.3°; 8.30 p.m., temp. 39.5°; 10 p.m., 38°. During reaction, face flushed and complains of feverishness, pain in left leg. Has slight exanthemata in face, itching, sweats severely. Pulse dicrotic, conjunctivæ reddish; complains of pain in left chest.

19th, 7 a.m.—Temp. 37.5°. Feels well.

20th, 9 a.m.—Temp. 36.4. 0.003 c. c. injected. Vital capacity 1800 c. c. Shows no particular reaction, except face, which in evening shows reddish spots. Sputum is increased 4 c. c. At inner side of left arytenoid body, have discoloration of mucous membrane.

22nd.—0.005 injected. Sputum is increased to 60 c. c. Bacilli found without morphological change. No temperature reaction.

23rd.—No fever; complains of pain in neck, oppression of chest. On anterior commissure, mucous membrane shows some whitish prominent patches. No distinct swelling surrounding it.

24th—0.008 injected. Temp. 38.5°. 4 p.m.—Complains of pain in neck, and this time ulceration of right arytenoid body is noticed. Both vocal cords injected. Epiglottis pale.

25th.—Temp. normal. Redness of larynx decreased. Sputum increased to 60 c. c.

26th.—0.001 injected. Temp. normal. The nummulated sputum appears mucous and is decreasing 30 c. c. Vital capacity 1700 c. c.

27th.—Exanthemata of face, very apparent. Evident ulceration of right arytenoid body and ulceration of vocal cords. Sputum 10 c. c.

28th.—0.005 c. c. injected; slight reaction. Complains of pain in back and shoulders. In six preparations, one bacillus found.

30th.—Dulness in lower apex is present. True bronchial breathing is hardly to be heard. Very occasional moist râles. Particularly evident in infra clavicular fossa. 0.020 c. c. injected; slight reaction. Vital capacity 2200 c. c. Sputum 40 c. c.

Dec. 2nd.—0.025 c. c. injected. Sputum 30 c. c. Catarrh of larynx receding and ulceration no longer evident.

3rd.—Anterior pillar very red and shows large number of whitish spots, which Gerhart considers herpetic.

4th.—0.030 c. c. injected. Temp. 38.1°. Sputum 20 c. c.

5th.—Vocal cords greatly injected and ulceration more evident.

6th.—0.040 c. c. injected. Temp. normal. In four preparations, no bacilli found. Sputum 20 c. c. Patient feels well.

10th.—0.060 c. c. injected. Sputum 20 c. c. Exanthemata of face. Vital capacity 1950 c. c.

12th.—0.070 c. c. injected. Percussion note on left side is hardly distinguishable from right. Bronchial breathing not heard; occasional râles. Sputum 20 c. c.; evident reaction. Bacilli few, in one specimen.

16th.—0.080 c. c. injected. Sputum 10 c. c. Feels very well.

Weight, Nov. 18th.—63 kilos. *Dec. 16th.*—66 kilos. Urine shows no albumen. Night sweats entirely gone. Sputa very scant. Small ulceration on third tracheal ring noticed.

1890. Case III.—Seamstress, æt. 19. Entered hospital Nov. 17th. Mother died of tubercular pleurisy; father died of accident; one brother alive and healthy. Lost four members of family from phthisis—three sisters and one brother. As a child, had measles and diphtheria; never scrofulous. Menses regular since fifteen years. No abortions or childbirths; anæmia for five years. Felt well, and did general housework till two years ago, when she began to work as seamstress. For one year had pain in right chest; since then, also cough—dry and hacking—but no expectoration. About ten weeks previous to entrance, had an affection of lungs, lasting eight days, with high fever, right pneumonia. Since then cough has greatly increased, expectoration set in, and night sweats. Never had hæmoptysis, and previous to Sept., no night sweats. Appetite poor.

Complains of extreme general weakness, loss of appetite and pains in right chest, cough and expectoration. Suffering expression of face, weakly built, small woman. Skin white, anæmic, not dry; had no exanthemata. Conjunctiva and lips anæmic; tongue coated. No infiltration of glands; slight dyspnœa. Apex of left lung, anteriorly, was two fingers' width above clavicle; right apex, anteriorly, one finger above clavicle. Dulness of right apex extending to fourth dorsal vertebra, posteriorly. Left apex had harsh vesicular breathing, with sonorous râles; right apex showed distant bronchial breathing and many moist râles, and occasional metallic click. Over left clavicle, dulness, and here, too, slight bronchial breathing. Right apex consolidated to second rib. Right side, below clavicle, shows tubular breathing and râles. Right lower limit of lung shows no movement on respiration. Heart normal, with systolic, anæmic murmur. Spleen normal. Laryngoscope shows no change. Bacilli found in large numbers.

Nov. 24th, 10 a.m.—0.002 c. c. Koch's lymph injected between shoulder blades. 5 p.m.—Chill, pain in right chest increased, nausea, headache, dizziness and vomiting. 6 p.m.—Temp. 39.5° C.; resp. 24; pulse 120. Sputum is increased, but not the cough.

25th.—Pain in chest, but feels well otherwise. Both arytenoid bodies show discoloration. Afternoon temp. 39°.

26th, 11 a.m.—0.005 c. c. injected. 12.30 to 2 p.m.—A chill. 4 to 5.30 p.m.—An intense chill; nausea, and tendency to cough; expectoration doubled, and more mucous; no sweat, feverish. Lungs—dulness increased three fingers' width. Right anterior apex very dull, and tubular breathing and consonant râles also anteriorly.

27th.—Lungs like the day before; expectoration increased.

28th, 9.30 a.m.—0.008 c. c. injected. Dulness on left side one centimetre deeper than on previous day. Tubular breathing does not extend down as far as dulness. No change in larynx. At night, retching and vomiting.

29th.—Left apex shows vesicular breathing, no consonant râles, and dulness is less extensive by several centimetres than on the 26th.

30th.—Bronchial breathing over left apex anteriorly, to-day, is not to be heard, but harsh and vesicular; no consonant râles. Dulness receding. 10 a.m.—0.001 c. c. injected. 4 p.m.—Chill and

reaction. Dulness under right clavicle, becomes marked and persists till next morning.

Dec. 2nd, 9 a.m.—0.001 c. c. injected. 3 p.m. —Reaction. 6 p.m.—Temp. 39.8°, accompanied by slight dyspnœa and vomiting.

3rd.—Feels perfectly well. p.m.—Over infiltrated right anterior portion—so-called Gerhart's sign.

4th.—0.015 c. c. injected. Lung changes, show more recession. 9 p.m.—Resp. 60. Patient weakening.

Weight, Nov. 20th.—81 lbs.; 24th, 77 lbs. = 4 lbs. lost in four days.

Dec. 3rd.—After five injections, 75 lbs. = 2 lbs. lost in nine days.

Dec. 5th.—Patient shows very high fever in evening; without injection, temp. 39.2°. Sleeps well, sweats in morning; complains of loss of appetite. Bacillus tuberculosi plentiful, but show changes in form, compared to bacilli before injection.

Dec. 6th.—0.015 c. c. injected. 6 p.m.—Temp. 39.5°. 9 p.m.—Intense dyspnœa; resp. 72. Great pain in chest; retching and vomiting.

7th.—Hardly any fever; temp. 38.2°.

8th.—0.015 injected. 6 p.m.—Temp. 39.4°; resp. 54. Can find no cause for dyspnœa. Complains of more pain in lungs.

10th.—0.015 injected. Temp. 38.6°. Hardly any dyspnœa. Pulse 140.

11th.—Out of bed again. In evening, without an injection, temp. 39.7°; sleeps little, extremely weak. At right base in axillary region, percussion note shorter than on left side; mucous râles.

15th.—No changes.

REMARKS.—In considering this case, it should be remembered that the sanitary arrangements of Charité Hospital belong to last century. There is practically no ventilation and the atmosphere of the wards is disgusting. The diet is not much better, and I append it:

Breakfast.—7 a.m.—Coffee, one small roll, one piece brown bread. 9 a.m.—Bacon (small piece), butter, one pint beer.

Dinner.—Hash (rice or beet with prunes), and in this a piece of boiled meat.

Supper.—Soup (farina or oatmeal), no meat, coffee.

VESICO-VAGINAL FISTULA, PRODUCED BY A ZWANK'S PESSARY; OPERATION AND CURE.

BY DIXON C. ALLAN, M.D., AMHERST, N.S.

During the summer of 1888 I was consulted by a prominent lady of this country supposed to be suffering from "disease of the kidneys." She was upwards of sixty years of age, the mother of six children, had been very robust and enjoyed the best of health until the commencement of her present trouble, now more than a year ago. She had, however, for some time previous to this been troubled with what she was told to be "falling of the womb," and for the relief of which she had been provided with a pessary—Zwank's. This she had worn for a number of months, and it gave a great deal of comfort, at no time producing the slightest pain or inconvenience. The present trouble commenced, to use her own words, "over one year ago, when in the act of walking across the room her water suddenly fell from her." From that day to the present time, summer and winter, day and night, her water had continued to flow from her constantly, keeping her clothing wet, producing, despite the utmost care, itching, irritation and scalding of the privates, buttocks and thighs, giving rise to a disagreeable odor, all of which combined, had made her inexpressibly wretched and disgusting to herself, her family and her friends. Moreover, she had suffered great depression of spirits, and a decided falling off in health and strength.

She had consulted medical men in reference to her condition, and for the last six months had been under the care of a local celebrity—a graduate of the University of Pennsylvania and an L.R.C.P., etc., Edinburgh—who among other things had given her a long course of "Warner's Safe Cure," for what he told her was diabetes!

An examination was proposed, but the patient "not having dreamed that such a measure would be necessary," and being a refined and modest lady, it was not until much explanation had been made that she finally submitted to the requirement.

Inspection discovered dermatitis effecting the thighs, nates and vulva, the labia being excoriated and swollen. The uretheral outlet was shrivelled and firmly agglutinated, nothing having evidently

passed it for a long time. Digital examination found the vagina tender, but normal in its anatomical relations, and the cervix uteri the same, while in front and a little to the left of the latter, occupying the vaginal junction, an opening which admitted the tip of the finger was easily recognized. By the use of the speculum and sound this proved to be a vesico-vaginal fistula. The opening was about three-fourths of an inch in length, and a little less than half as much in breadth, its borders rather thin, indurated, smooth and pale. The patient was informed that an operation afforded the only hope she had of benefit; and its full consequences, possibilities and probabilities were carefully explained. After consulting with her husband and family an operation was decided upon. Some time was occupied in placing the parts and system in as good condition as possible, and when this had been accomplished, assisted by Drs. Robert Mitchell and E. H. Lowerison, I proceeded to operate.

The patient was placed upon a table, etherized and secured in the lithotomy position, Sim's speculum and retractor introduced, and a strong silk thread passed through the cervix—by which to pull the uterus down—and so bring the fistula to light. This we expected to easily accomplish from the history of prolapsus (" falling of the womb ").

But in this we were only partially successful, as the uterus was very firm in its position, and from this fact and other reasons we concluded that her former difficulty had been due to cystocele and not prolapsus; and subsequent events tended to substantiate that opinion. We were consequently compelled to use the Sim's speculum and retractors; but the uterus was still held down as much as possible by means of the cord to which a weight was attached and allowed to hang over the foot of the table, thus saving the hand of an assistant for that purpose. The borders of the fistula were pared, being well levelled at the expense of the vaginal wall and underlying structures, down to the mucous membrane of the bladder. The bevelled margins of the fistula when completed, presented a denuded surface about one-third of an inch wide all round the orifice. This part of the operation was performed with a Sim's bistuory and forceps. Sponges were not used very freely, but a boro-salicylate solution was frequently played upon the wound from an irrigator arranged for that purpose. The fistula was then closed by nine points of silk-worm gut sutures; the proper needles —curved and without cutting edges—being employed for the purpose. The patient was placed in bed, and a self-retaining catheter, to which a rubber tube was attached, leading to a vessel beneath the bed, was introduced.

Although every precaution was observed to avoid injury to the vesical mucous membrane, nevertheless for the first twenty-four hours the urine was tinged with blood, and the catheter had to be twice removed during that time on account of its being stopped with clots. Furthermore, the catheter produced considerable pain and irritation in the urethra and neck of the bladder, and led to the conclusion that the constant retention of the instrument was of doubtful utility.

The patient who was much reduced and quite weak at the commencement of the operation, manifested considerable prostration for some hours afterwards, and on the second day suffered from a complete suppression of urine for the space of twelve hours. It was not retention, as not a dram of urine was secreted during that time. I could not ascribe any cause for this, other than the effects of the ether. Chemical and microscopical examinations of the urine had given no evidence of any renal affection. The patient's condition was serious during this period, but it ultimately yielded to active treatment and the urinary secretion again became established.

From this time forward there was satisfactory and progressive improvement.

On the fourth day the catheter was removed and only used as occasion required, which was for a space of about a week, during which time there was both, some retention and incontinency. After this the urine was under the patient's control, and could be held comfortably and passed at will.

On the eighth day the stitches were removed, and the fistula found to be completely closed—not a drop of urine passing from the time of its closure, so far as could be ascertained.

Warm vaginal injections of creoline, which, as a matter of course, were used from the first, were continued throughout.

A week later a few granulating spots occupying the site of the wound, were touched with nitrate of silver, and in a few days more all was

thoroughly cicatrized, and the cure complete. Two months afterwards the patient complained that the "falling of the womb" was again troubling her somewhat, and an examination showed the difficulty was due to cystocele. For this, astringents and a Skene's cystocele pessary were used, and from then until the present, the patient has been very comfortable and regained considerable flesh and strength, and her general health has greatly improved.

The main objects of reporting this case are:—The necessity is shown of making a correct diagnosis—a very easy matter truly—also that such unfortunate cases may haply be benefited by an operation under even unpromising circumstances; and that the operation does not require an expert or specialist for its successful performance; and it is also a warning against allowing the management of pessaries to pass into the hands of patients, particularly such faulty ones as Zwank's, and others of equally bad construction.

CASE OF INVERSION OF BLADDER OF TWELVE YEARS' STANDING.

BY DR. N. E. MCKAY, M.R.C.S. ENG.,

Surgeon, Victoria General Hospital, Halifax, N. S.

C. C., æt. 13, was admitted into the Victoria General Hospital on the 9th day of August, 1890, suffering from inversion of the bladder.

Family history.—Sister has hip-joint disease. Father is now in hospital suffering from vesical calculus.

History of illness.—When patient was about 9 months old she suffered severely from prolapsus recti, which lasted off and on for a year. Having lived in a remote part of the country where the services of a medical man could not be easily obtained, she received no treatment for the trouble. From her birth her urine dribbled away constantly. When suffering from the prolapsus recti and its concomitant tenesmus, a tumor suddenly appeared at the vulva, which did not increase in size with time. It never went away until a month before patient was admitted, when, one morning as she was getting up, it suddenly disappeared, but it returned in the afternoon of the same day.

Present condition.—Patient is emaciated and pale, but otherwise is apparently in good health. On examination, a semi-elastic tumor the size of a large hen-egg, pyriform in shape, is found protruding from the vulva; its base is directed forward, and it is attached by a large pedicle to the arch and rami of the pubic bones. The tumor is very florid and is covered with a grayish gelatinous mucoid substance. There is complete absence of clitoris, meatus and urethra. On the under surface of tumor in the mesial line, near its pubic attachment, a small opening is perceptible, surrounded by a cluster of small tubercles, from which urine dribbles away constantly, and through which a size 10 female catheter-bougie is easily passed to the extent of eight or nine inches and urine withdrawn. On closer examination, a slit-like opening is discovered on left aspect of base of tumor, from which dirty-colored urine is easily drawn.

The abnormal condition of parts interfered with our obtaining urine in quality and quantity, by which we could determine the condition of her kidneys.

Treatment.—On the 13th August I returned the bladder, under an anæsthetic, by gentle digital pressure. The fingers being first well oiled with carbolized oil, the meatus was greatly dilated, large enough to admit two fingers. To lessen its calibre, I vivified the mucous membrane on either side and brought and held the freshened surfaces together with silver sutures, two on each side; then dusted pad with iodoform and applied a pad of cotton wool with a T bandage to prevent recurrence of the inversion. The wound was dressed two or three times a day *pro re nata*.

From the 13th day of August, the day of operation, till the 17th, patient's temperature ranged from 97° to 99½°; general condition fairly good. From the 18th until the 21st, temperature gradually rose to 101°, when she complained of pain in left iliac region. This did not create any undue alarm, as she had a similar pain in same place at different times before. On the 18th, the wires were removed and wound looked well. From 21st till 24th, temperature ranged between 97° and 101½°. On the 25th she fell into collapse; temp. 97½° to 96°; pulse weak and thready; in which condition she remained until the morning of the 26th, when she died.

Post-mortem examination.—Bladder *in situ* and

greatly distended and thickened; urethra and clitoris completely absent; both ureters greatly distended and their walls thickened; both kidneys completely disorganized and flattened out like a pancake. The cortical and medullary substances are completely riddled with pus cavities; each pus cavity is surrounded by a thickened adherent pyogenic membrane, and the pelves of both kidneys is full of purulent material.

The rareness of inversion of the bladder is my only excuse for publishing a report of this case.

Correspondence.

To the Editor of the CANADA LANCET.

DEAR SIR,—Considering the universal importance of the recent discovery of Prof. Koch of the treatment of tubercular affections, it may be of interest to your readers to learn the results of experiments up to the present. Speaking generally, it may be affirmed that Prof. Koch has not over-estimated the importance of his remedy. While it remains in the experimental stage in the human patient, it must needs be crude and blurred by occasional fatalities. It is likely to be no exception to the rule that much practical knowledge is to be gained by careful investigations, before such a potent remedy can be used with impunity. Several thousand patients are at present under observation, and useful information is rapidly accumulating. In lupus it has passed the experimental stage and many cures are to be seen at the hospitals. In pulmonary consumption, the injections are given in much smaller quantities, and this necessitates a longer interval before a curative dose is arrived at. In from three to four weeks' time many cases of consumption will have undergone the course, and until then opinions must be very guarded. Yet incipient cases appear cured and many advanced ones benefited. Some forms are only slightly affected by treatment. Prof. Bergman is enthusiastic and at the polyclinic showed us numerous cases of tubercular joints and glands greatly improved and incipient ones cured. Dr. Lennox Browne, of London, a throat specialist, strenuously advocated the method, and at the Charité Hospital here we saw a typical tubercular ulcer of the larynx heal in less than a week. As a means of diagnosis it is very important, for while an injection, say, of 0.001 c. c., gives no reaction in the non-tubercular patient, it on the other hand produces a decided impression in the tubercular, even when lying dormant. This is demonstrated in the case of a nurse in the Charité Hospital, who, when young, suffered from a tubercular disease of the bones of the hand and foot, and for the past seven years from lupus of the nose, which was apparently cured. The lungs were examined repeatedly, but found intact. At her own suggestion, 0.005 c. c. of the lymph were injected, with the result that in ten hours the nose presented the appearance as if an acute erysipelas had been implanted upon it, and next day a tubercular ulcer appeared in the trachea and signs of consolidation in the right lung, accompanied by free expectoration, fever and dyspnœa. This proved the presence of tubercle in these several places. The injections were repeated at intervals up to the present, when 0.005 c. c. produces no reaction, and the nose and throat are healed.

The importance of the discovery can be best estimated if we consider that one-half of all deaths in Great Britain, between the ages of fifteen and thirty-five, result from tubercle.

A new era has undoubtedly arrived in the practice of medicine, of which this is but the prelude to other triumphs of a similar kind. Already, indeed, immunity from diphtheria and tetanus is reported in the lower animals by inoculation, and no doubt cancer will soon succumb to treatment.

At this point the oft-mooted question forces itself upon us—whether, namely, the human race actually benefits in the long run by those artificial checks upon the operation of natural selection? Manifestly, by artificially rescuing from death those who are prone to disease, we increase the racial predisposition thereto and lower the standard of health. This artificial interference with the operation of natural selection is insignificant when compared with the workings of nature. But with regard to tubercle, it is no doubt more frequently the result of unfavorable external conditions than of inheritance, and we have abundant reason to believe that—by means of the destruction of the breeding-grounds of phthisis and by improved hygienic measures, together with proper precautions against infection—this hereditary tendency to the disease would die out in a few generations and that a healthy race would survive,

free from tubercular taint and endowed with the vivid intelligence and bright social attributes which are well known to be so common amongst those who now often succumb to the disease, and that we may look forward to its ultimate extinction as a cause of death.

FRED. WINNETT, M.D., M.R.C.S. Eng

Berlin, Jan., 1891.

Reports of Societies.

BALTIMORE GYNECOLOGICAL AND OBSTETRICAL SOCIETY.

DECEMBER MEETING.

Vice-President, Dr. Charles H. Riley, in the chair.

Dr. Wm. E. Moseby related the following case: Mrs. Maggie G., a light-colored woman, about 30 years of age, twice married, had had two children by her first husband. Had suffered much during the past twelve years from dysmenhorrhœa; had been unable to do ordinary work.

Examination showed the uterus to be retroflexed and firmly bound down, but the character of the adhesion could not be definitely made out. There was an irregular-shaped elastic mass in the position of either tube, diagnosticated as cystic ovaries, together with chronically inflamed tubes. All the pelvic tissues were very sensitive to pressure. There was a deep, double laceration of the cervix, and a lacerated perineum, with very lax vaginal wall, but only slight rectocele.

When the abdomen was opened the mass on either side of the pelvis was found to be composed of a cystic ovary, and the corresponding tube firmly matted together by old organized adhesions, each mass being firmly bound down to the pelvic wall by numerous old and many more recent adhesions. There were also adhesions to the omentum. The left ovary ruptured before it could be removed. The mass in the right side appeared to be a large hematosalpinx, but examination proved it to be an ovarian cyst into which blood had entered from a ruptured Graafian follicle. The adhesions behind the uterus were very broad, strong bands, and were pulled off the uterine wall. All possible care was used to secure the patient against hæmorrhage, and the abdomen was douched out with hot boiled water until the uterine flow was practically colorless. A glass perforated drainage tube was introduced to the bottom of the *cul de sac*, and the incision closed above it. The extreme difficulty of separating the adhesions and the douching prolonged the operation to about one and a-half hour.

Although stimulants and artificial heat were pushed, no reaction could be obtained, the temperature never reaching 95°, and the patient died about six hours after the operation, apparently from shock.

At no time was there any discharge of blood from, or even bloody fluid from, the drainage tube. Dr. W. G. Keirle, however, kindly examined the pelvic cavity post-mortem, and reported that death was due to hæmorrhage, the exact source of which could not be made out.

Dr. J. Whitridge Williams, kindly furnished the pathological report, which will be given below.

Dr. Thomas Opie exhibited a placenta that he had gotten a few hours before the meeting, from a case of placenta prævia.

The patient was 35 years of age, and had borne one child previously. When he saw her first she was blanched and exsanguinated. The blood-flow began three days before, with a loss of a quart, and continued with more or less rapidity up to the time of operation. Her confinement was not expected for two months. When first seen by him there were some rhythmical pains, and some dilatation. The cervix was dilated with the fingers and cone of the hand; the placenta was detached with a sweep of the forefinger around the cervix, the bag of waters was artificially ruptured and traction forceps applied. The child was delivered in fifteen minutes without further loss of blood, the placenta coming away simultaneously with the birth of the child. Though the position was occiput posterior, there was no laceration of the perineum, and the child was unscathed. Both mother and child were left doing well.

Dr. Opie also exhibited a specimen of an ovarian tumor which he had recently removed. The tumor had developed into the epigastric region, and the abdomen was about as large as it would have been at the full term of pregnancy. It took two hours to break up the adhesions, which were

very dense between the tumor and the intestines, and between the tumor and the omentum. The second tumor was taken from the pelvis. It was ovoidal in form, about seven inches in length, by five inches wide and four inches thick. It was removed entire, and upon section it proved to be a dermoid growth. There was no history of peritonitis to account for the extensive adhesions. The patient had never had a day's discomfort. other than from the size of the cyst. She did not know until four weeks ago that she had a tumor. The material in the large cyst was colloid. Notwithstanding the extensive adhesions, the length of time consumed in breaking them up, and the injury resulting from the operation, the patient has made a good recovery, this being the seventeenth day after the operation.

Dr. Howard A. Kelly: The term colloid is often used in two senses. An incorrect use, describing the yellowish, more or less opalescent, thick, viscid materials, often found in ovarian cysts; it is employed in such cases, as more or less synonymous with gluey. The other use of the term is to describe a rare condition, in which the contents of the cyst are more like calf's-foot jelly, and have a vitreous fracture; they are with great difficulty removed, clinging to everything. This latter is true colloid, and when found such tumors are of a suspiciously malignant character. We should limit the use of the word to the latter condition.

I wish to refer to two minor matters of interest supported by this specimen of placenta prævia. The position which the placenta has occupied in the uterus can accordingly be determined by the position of the opening in the membrane made by the passage of the child, inasmuch as the fundus uteri must of necessity be just opposite to this perforation; we can, therefore, by re-constructing the membranes see just in what part of the uterus the placenta lay. In one of my placenta prævia cases there was no hole at all in the membranes, as I had extracted the dead child through a perforation in the placenta. We can do still more than this in the way of a diagnosis with the membranes. By allowing them to be expelled untouched into the bed and carefully observing their exact position, we can tell as well on which side of the uterus the placenta was attached.

The second point is, that we may have placenta prævia hæmorrhage without being able to detect a placental margin, owing to a low attachment of part of the placenta, near the internal os, below the contraction ring, but not over the hole of the cervical canal. The lower part of a placenta thus attached is separated by the opening up of the lower uterine segment.

Dr. L. E. Neale said: although Dr. Kelly had alluded to a point of some interest, it is of far more practical importance to recognize placenta prævia prior to its expulsion and as far as he knew this could only be done with certainty by digital examination; partial placental separation and rupture of the membranes during labor in cases of placenta prævia was outlined by Mariceau as early as 1668, but was fully described by Puzas in 1759; he saw nothing in the history of the present case as related by Dr. Opie that contra-indicated the method of Broxton Hicks, a method that up to the present time had given by far the best results—viz., 4½% maternal mortality. If this method when practicable could be performed earlier than delivery by any other method, and was not difficult, and gave the best results, why not have applied it in the present case?

Dr. Wilmer Brinton asked why Dr. Opie objected to the tampon in cases of placenta prævia; he thought no arbitrary law could be applied.

Dr. Opie said in closing the discussion that results of operative procedure depended largely upon the skill and familiarity of the operator with the special operation resorted to; in his first case of placenta prævia he had attended, he had turned and lost both mother and child. With rapid dilatation and forceps he feels that he has command of the situation, and having resorted to that method repeatedly, has gained greater skill and does better work. While Dr. Neale might do better by some other method, he is fully satisfied that he does best himself with the forceps; he is opposed to the use of the tampon because it conceals what is going on; it is not best to wait for pains. He is in favor of rapid dilatation and delivery in placenta prævia, in puerperal eclampsia and in abortion; to put in a tampon and go away is hazardous; the tampon is of very little help in hæmorrhage.

Dr. Kelly read a paper upon, "The Examination of the Normal Pelvic Viscera"; describing various new dimanual and trimanual methods of palpating the normal ovary.

Dr. Wm. Church: When speaking of what should be found or can be found at an examination, it is necessary to consider the circumstances under which the examination is made. Office examinations are the most usual, and all the facilities are not usually at our command, and this circumstance should be specified and taken into account. Certain advantages in methods give certain advantages in results. Of course when the woman has no ovaries, or when the ovaries are not in the pelvis cavity, they cannot be palpated.

Dr. Hunter Robb: I thoroughly agree with Dr. Kelly that the normal ovary can always be palpated under an anæsthetic, and also that in a large number of patients the ovary can be outlined without anæsthesia. Four years ago Dr. Kelly taught me the method of examining the ovary by invaginating the perineum, and I can testify to its utility. This lengthens out the examiner's finger and thus enables the practitioner who has a short finger to accomplish it with almost the same facility as a longer one. The corrugated tenaculum devised by Dr. Kelly may be used to advantage with nulliparous patients to define the uterus and its appendages still further. No one, of course, would think of using it in inflammatory conditions of the pelvic cavity.

Dr. B. B. Browne said that he had listened with much pleasure to Dr. Kelly's paper, and congratulated him upon the admirable manner in which he had systematized these valuable methods of pelvic examination—methods which most of us had been using in our gynecological practice for several years. He generally preferred the use of two fingers in the vagina, as he could thus make a more satisfactory examsnation of the tubes and ovaries than with one finger. In many cases a more accurate idea of the adhesion can be had by getting the fingers about the ovary and fixing it between the fingers and the spinal column; pulling down the uterus aids diagnosis very much.

Dr. Opie said that there were few objections to Dr. Kelly's paper, but it seems that the elbow on the hip is incompatible with delicacy of touch. The law, as expressed by Martin, being—"The more lightly the parts are touched the easier the goal is reached, and the less the force that is employed, the more distinctly things are felt." He thinks it is a cruel sort of thing to drag an organ out of its position, and would like to know how much displacement can be made with the tenaculum without producing dangerous trouble; for example, cellulitis, metritis and injuries to the peri-uterine tissue; he had met a number of cases in which he had not been able to make out the ovaries. Dr. Martin says he can palpate normal tubes, but Dr. Opie has never been able to reach that degree of perfection.

Dr. Neale referred to the possibility of tracing out the uterus through the anterior vaginal wall, as had been demonstrated to him by Dr. Kelly, at the Hopkins Hospital clinic; he had no doubt that in a large majority of cases the normal ovary could be displaced out of its normal position and palpated or touched with ease through the vaginal walls. He believed that a great deal of difficulty in an ordinary gynecological examination was due to the fact of neglecting to empty the bladder, or to employ the rectal touch.

Dr. H. P. C. Wilson said, he thought there were a large number of women in whom he was sure he could not palpate the ovaries, and he was doubtful if any one could do so. The cause is often found fixed in the pelvis as in a mass of putty, and no definite outlines can be made out; in other cases the abdominal walls are from two to four inches thick with fat, and in such cases he had failed to find the ovaries.

Dr. J. Whitridge Williams said, that he could certainly feel the ovaries in four cases out of five, and that he had succeeded occasionally in finding the ureter.

Dr. Moseby: The old teaching is that the ovaries can not be palpated in their normal position. When an ovary can be found by an ordinary examination, its location may fairly be considered as abnormal. If Dr. Kelly's idea, that all men who cannot make out normal ovaries should be thrown out of the specialty, should be enforced, a large number of experienced and thoroughly informed specialists would be excluded from practice. It is practically impossible to examine every patient thoroughly enough to make out the normal ovaries in office examinations. In dispensary, and more especially in hospital practice the case is very different.

Dr. Browne thinks that the cases in which the ovaries cannot be felt are the abnormal cases. If the symptoms point to an examination of the ovaries they can be made out, but if necessary an anæsthetic should be given.

Dr. Kelly, in closing the discussion, said that he examines every case coming to him, vulva to ovaries, making a special note of every important organ.

When the patient complains of persistent pelvic pain the examination is never considered complete or the diagnosis sure without a special note as to the condition of the ovaries. I have been asked about examining the ureters by palpation. They can be felt in almost all cases, being distinctly traced from the anterior part of the pelvis back to the side of the uterus. Pressing upon a diseased nerve causes a desire to pass water, often irresistible. I prove that this structura is a

ureter by catheterizing it. The catheter can be felt through the vaginal wall outside the bladder in the ureter, and the urine collected as it comes down from the kidney, drop by drop. The Fallopian tube can often, but not always, be made out.

The amount of displacement of the uterus which can be made without injury is considerable. In normal cases it can easily, and without harm or pain, be brought down to the vaginal outlet. When there is fixation, gentle traction can be made until pain is felt. In these cases I use traction with the corrugated tenaculum, and then pushing up the fundus with the finger, practise massage, stretching the adhesions. I am sure that the downward traction to the vulva without pain never does any harm.

Dr. J. Whitridge Williams' remarks upon the pathological specimens submitted to him by Dr. Moseby, Dr. Wilson and Dr. Opie :

The specimens submitted by Dr. Moseby are of considerable interest, and consist of the uterine appendages from both sides. The specimen from the left side consists of the Fallopian tube, ovary and part of the broad ligament. The tube was completely occluded at its fimbriated end, but otherwise presenting nothing abnormal, except numerous small adhesions. It contained a very small amount of dirty, yellow fluid, consisting of columnar ciliated epithelial cells and numerous disintegrated cells. The ovary was considerably torn and covered by very dense adhesions, while the broad ligament presented nothing of note. The specimen from the right side was an irregular mass of tissue about 5x4x1½ cm., consisting of the tube and ovary imbedded in dense adhesions. At first glance the mass appeared to be composed of two parts, a large solid anterior portion covered by dense adhesions, and posterior to it a cystic structure about 4x1½ cm. in size. This had a bluish color, thin wall, and was intimately connected with the rest of the mass. Imbedded in adhesions, a piece of the ampullar end of the tube was found, which could be traced for about 4 cm. and then lost itself in the mass, and appeared to have no connection with the above-mentioned cystic portion. The main portion of the mass on section was shown to be composed of ovarian tissue, which was covered and completely hidden from view by very dense adhesions. It contained two tolerably fresh corpora lutea about 1½ cm. in diameter. The larger of these corpora lutea communicated by a small opening with the cystic portion above mentioned, which contained a thin reddish, watery fluid containing blood cells. On cutting open this cystic portion its walls were found perfectly smooth with several smaller cysts projecting into it. These varied in size up to 2 cm. in diameter, and were filled with a clear watery fluid, and arose directly from the ovarian tissues. On examining the scrapings from the walls of these cysts I found that they were lined by a layer of almost flat cuboidal cells, which were distinctly ciliated. These cysts could not have originated in the tube, as was readily demonstrated by their arrangement in relation to the larger cyst, and by the lining epithelia, which was totally different from that of the tube. Their smooth interior precluded the idea of a ciliated papillary cystoma, and the only probable thing for them to be were dropsical Graafian follicles, which had been prevented from rupturing by the dense adhesions covering them, and so attained their large sized. The fact that they were lined by ciliated epithelium is not at all opposed to this supposition, for cilia have previously been found in the dropsical Graafian follicle, as was shown by Von Velits, of Budapest, about a year ago, and as I found, altogether independently of him, last spring. But as yet I have not made a sufficient number of observations to assert that all dropsical follicles are lined by ciliated epithelium. The blood in the large cyst in all probability came from the corpus luteum, with which it was connected. The adhesions about the ovary were particularly dense and resisting. The diagnosis from the specimen is pelvic peritonitis, with adhesions binding down the adnexa on both sides, particularly the right side, with several very large dropsical Graafian follicles.

The specimen submitted by Dr. H. P. C. Wilson was a small myoma about 3 cm. in diameter, and bore on the surface a piece of vaginal membrane the size of a two cent piece. The tumor was submitted to me to decide whether its origin was from the anterior fornix or from the uterus itself. Sections made through the tumor and the vaginal mucous membrane readily showed it to be a myoma, which was separated from the submucous tissue and epethelium by numerous bands of non-striated muscular tissue. From the presence of muscular fibres between the tumor and epithelium, I think we are justified in concluding that it was not of vaginal origin. Were it of vaginal origin it should arise from the submucous tissue and be immediately adjacent to the epithelium and not separated from it, as was in this case, by muscular tissues. Force is lent to this conclusion by the fact that vaginal fibroids are very rare indeed, and many of the reported cases, especially fibroids, from the anterior fornix had their origin in the anterior wall of the uterus instead of the vagina.

The specimen submitted by Dr. Opie was a greatly hypertrophied posterior lip of the cervix, which measured 5 cm. in length and 2 cm. at its broadest part. Microscopically it was found to consist of almost normal cervical tissue, with only a very slight increase of the connective tissue. Except at its cut surface the entire mass was covered with the usual stratified epithelium.

Generally speaking, we may distinguish two forms of hypertrophy of the portio-vaginalis—fallicular and diffuse or simple hypertrophy. The first form is due to increase in number and size of the cervical glands, with frequent retention of their contents, and is quite frequent, but never attains a very great size, and is readily distinguished by its nodular appearance. The diffuse or simple form of hypertrophy is far more important. In this there is a general increase in all the elements that compose the cervix, though there may be a slight increase in the amount of connective tissue, as there was in this case.

WILLIAM S. GARDNER, M.D.,
Secretary.

Selected Articles.

WHAT I HAVE LEARNED TO UNLEARN IN GYNECOLOGY.

BY WILLIAM GOODELL, M.D.

Every earnest worker in any field of the inexact sciences finds himself compelled to unlearn as well as to learn. The errors which he discovers and weeds out will usually be traditional teachings—the legacies of our forefathers—for we get many of our opinions, as well as many of our diseases, by heredity. What I have thus learned to unlearn in the treatment of women's diseases will be the burden of this paper.

To begin, then, I have learned to unlearn the grandmotherly belief that the climateric is in itself an entity, and that, as such, it is responsible for most of the ills of matronhood, and especially for that of menorrhagia. True, it must be conceeded, that as an entity it does seem to disturb the vasomotor system, and through it to cause many severe perturbations, such as tinglings and numbness, and sweating of the skin, flushes of heat and shivers of cold, emotional explosions, and a large group of hysterical symptoms. It can also lay claim to being an important factor in the causation of insanity. Yet, contrary to the prevalent lay and professional belief, how rarely can true uterine hæmorrhages, or other uterine discharges be traced to the climateric as a cause in itself. Yet many a poor woman has lost her health, her life, indeed, by her own and her physician's traditional belief, that her hæmorrhages or other vaginal discharges are critical and due to the "change-of-life," as it is popularly called—a misnomer which too often leads to indolent diagnosis and slovenly therapeutics.

What physician of any practice has not been called in to see some wretched sufferer, whose health has been crippled for months, or even for years, by hæmorrhages or by other discharges from the sexual organs, which have been attributed to the "change-of-life" by her friends, or—what is more inexcusable—by the successive physicians whom she has consulted? To the shame of the latter, they may not have made even a digital examination; yet a polypus or a fungoid degeneration of the endometrium, or a uterine fibroid, or a cancer of the cervix has been found by a more alert man, who does not believe in climateric omnipotency. Never can I forget a case—not the only one—of a beautiful woman, beloved by a large circle of friends and surrounded by every luxury that wealth could furnish, who was allowed by her physician to bleed almost literally to death. Why? Because a polypus, being at first intra-uterine, was not recognized, and because her age justified, in his opinion, the diagnosis of "change-of-life." This diagnosis having been made, no other vaginal examination was ever thought of by this physician. But when he was discharged and another one was called in, the latter found the polypus dangling in the vagina. She was bedridden and as translucent as alabaster when I twisted off the growth. Hæmorrhages did not return, but neither did her health, and she died a few months later quite suddenly and very unexpectedly.

In other cases, by the careless indolence of the physicians, begotten by this traditional belief in climacteric influences, I have been compelled to undeceive some poor women and break as gently as possible to her, that the flow which she had joyfully accepted as a return of her monthly periods, and which she has mistaken for rejuvenesence, is the sure token of an incurable and far advanced cancer of the cervix.

I have learned to unlearn the teaching that woman must not be subjected to a surgical operation during her monthly flux. Our forefathers, from time immemorial, have thought and taught that the presence of a menstruating woman would pollute solemn religious rites, wonld sour milk, spoil the fermentation in wine-vats, and do much other mischief in a general way. Influenced by hoary tradition, modern physicians very generally postpone all operative treatment until the flow has ceased. But why this delay, if time is precious and it enters as an important factor in the case? I have found menstruation to be the very best time to curette away fungous vegetations of the endometrium, for, being swollen, then, by the afflux of blood, they are larger than at any other time, and can the more readily be removed. There is, indeed, no surer way of checking a menorrhagia or of stopping a metrorrhagia than by curetting the womb during the very flow. While I do not select this period for the removal of ovarian cysts, or for other abdominal work. such as the extirpation of the ovaries, of a kidney, of

breaking up intestinal adhesions, etc., yet I have not hesitated to perform these operations at such a time, and I have never had reason to regret the course. The only operations that I should dislike to perform during menstruation would be those involving the womb itself—such as the removal of a uterine fibroid, or a partial or a complete hysterectomy, and the various operations for uterine cancer, etc. This exception is based upon the danger of hæmorrhage arising from the increased vascular tension and pelvic hyperæmia, which exist during menstruation. This is well shown in fibroid tumor of the womb, in which this increased vascularity causes a corresponding increase in the size of the tumor itself. For obvious mechanical reasons it would also hardly be wise to sew up the torn cervix of a menstruating womb.

I have learned to unlearn that anteflexion and anteversion in themselves—that is to say, as displacements merely, and without narrowing of the uterine canal—are necessarily pathological conditions of the womb. Text-books speak of them as such, and exhibit many ingenious forms of pessaries devised to rectify these so-called displacements. But very rarely indeed do I have to resort to them, and then only to a stem-pessary in anteflexions; for I find in almost every virgin or every barren woman that the womb in varying degrees is either bent forward or is tilted forward, and is apparently resting on the bladder. The mistake made, as I have more elaboratively shown in my *Lessons in Gynecology* is in attributing to this natural position of the womb the various forms of pelvic trouble, especially that of irritability of the bladder, to which women are so liable. But the sympathy between the brain and the bladder is a remarkably close one—so close, indeed, that some physiologists contend that "every mental act in man is accompanied by a contraction of the bladder." The irritability of the bladder thus becomes one of the first symptoms of nervousness, to which everyone is liable. Many a lawyer before pleading an important case, and many a clergyman before delivering a discourse, is compelled from sheer nervousness to empty his bladder. So it is with the lower animals, which, when frightened, micturate involuntarily. A nervous bladder is then one of the earliest phenomena of a nervous brain—for nervousness means a deficient control of the higher nerve-centres over the lower ones—a lack of brain-control. Now a hysterical girl, or a woman whose nervous system has given way under the strain of domestic cares, consults the physician for such ordinary symptoms of nerve-exhaustion as wakefulness, utter weariness, a bearing-down feeling, backache, and, perhaps, above all, an irritable bladder. Upon making a digital examination, he usually finds the fundus of the womb resting on the bladder where it naturally should rest. At once he jumps to the conclusion that the whole trouble is due to the pressure of the womb on the bladder—viz., to the existing natural anteversion or to the anteflexion, as the case may be. Enticed away by the vesical lapwing from the bottom factor—the shattered nerves—he now makes local applications, and racks his brain to adapt or to devise some pessary capable of overcoming the supposed difficulty, heedless of the dilemna that the upward, or shoring, pressure of the pessary on the bladder must be greater than the counter, or downward, pressure of the womb, to which he attributes the vesical irritability.

In the lying-in chamber the fear of septicæmia will ever haunt me, but I have long since abandoned the idea cherished by that class of waistless and witless nurses, now happily obsolescent, that the parturient women is to be swathed like a mummy and to be kept as immovable. What earthly harm can accrue to a woman after a natural labor if she turns over from side to side, sits up in bed, or even gets up to use the commode, if she feels like it, I cannot see. Natural labor is a physiological process, not a pathological one, but tradition has thrown around the lying-in bed a glamor of mischievous sentiment.

In relation to this let me express my disbelief that mammary abscess comes from "caked" breasts, or from breasts over-distended from a secretion of milk too great for the infant's needs. Mammary abscess, in the suckling woman comes, in my opinion, from cracked nipples, and from cracked nipples alone. In proof of this let me ask my readers if any of them has ever had a case of mastitis after a miscarriage, or one of gathered breast following a stillbirth—always provided the breasts were let pretty much alone so far as pumping and sucking are concerned. Under these circumstances the unsucked and unpumped breast will swell up and grow painfully hard, but it will not inflame or suppurate. Let me not be understood as saying that an overdistended breast should not be relieved by sucking or by pumping; but the means employed for this relief must be so sparingly used, and at such long intervals, as not to crack the nipples. This immunity from mammary abscess after miscarriages and stillbirths is attributed by the physican to his local applications of belladonna, or of other milk-drying drugs. But it comes from the absence of the exciting cause of cracked nipples—the sucking child.

Long ago I came to the conclusion, that the womb, like the nose, has its own secretions; and that, because the cervical canal is stopped up with mucus, it is not to be treated any more harshly than a stopped-up nose. I was led to this belief from seeing very many cervical canals wholly closed up, even destroyed by the remedies applied to get rid of this mucus. Then again I found that, just as the nose secretes abundantly under

the stimulus of the emotions, so the womb secretes more actively under a stimulus conveyed to impressionable nerves—so much so, indeed, that leucorrhœa is a common adjunct to nerve-prostration, and is then cured by the cure of its cause. This nasal analogy led me soon to think that even uterine catarrhs are not of such paramount importance as to merit heroic treatment, and that metritis and endometritis, in so far as symptoms are concerned, are often idle words. The mucus of a uterine catarrh is in quality very much the same as the mucus of a nasal catarrh, and its secretion is in itself no more weakening. It is not a disease in itself, but is merely the symptom of a disease. It is not, thefore, that highly vitalized fluid, the loss of which, according to the traditional belief of the great majority of physicians, and of all women, saps the very citadel of life, brings on decrepit and premature old age, and hastens its victim to an untimely grave. This widespread error is a relic of mediæval ignorance, which believed in the existence of two seeds—the male and the female semen—and their admixture to insure conception. Hence leucorrhœa has erroneously come to mean pretty much the same thing as spermatorrhœa—a belief fostered by cunning quacks, who know how largely sex and sexuality make up our being and influence our credulity.

As a corallary to this, let me add, that I have wholly freed myself from the belief that cellulitis is at the bottom of most female ailments, and that the hot-water douche is its cure-all. My experience teaches me that, save in some case of active congestion or of acute inflammation of the pelvic organs, the hot douche is of questionable utility, and that its indiscriminate employment has done far more harm than good, especially when continued for any length of time. I cannot withhold the opinion that from its use both ovaritis, salpingitis, and peri-uterine inflammation have actually been set up by the overheating and the subsequent chilling of the pelvic organs. The crucial test of surgical research which cannot be gainsaid has shown that cellulitis is almost a myth, that what have long been deemed exudation tumors and inflammatory deposits in the areolar tissue, are tubal and ovarian lesions.

I have learned to unlearn the idea—and this was the hardest task of all—that uterine symptoms are not always present in cases of uterine disease: or that, when present, they necessarily come from the uterine disease. The nerves are mighty mimes, the greatest of mimics, and they cheat us by their realistic personations of organic disease, and especially of uterine disease. Hence it is that even seemingly urgent uterine symptoms may be merely nerve-counterfeits of uterine disease. I have, therefore, long since given up the belief, which with many amounts to a creed, that the womb is at the bottom of nearly all female ailment. Nerve-strain, or nerve-exhaustion, comes largely from the frets, the griefs, the worries, the carks and the cares of life. Yet, although the imagination undoubtedly affects it, it is not a mere whim or an imaginary disease, as all healthy women and most physicians think; but it is the veriest of realities. When some flippant talker or some slipshod thinker scoffs at nervousness as a sham disorder, I say to him: "Can the bribe of a principality keep you from blushing when you are ashamed, or from blanching when you are afraid? Under the flitting sense of shame or of fear these vasomotor disturbances are momentarily beyond your control; and so they are in the nervous woman, whose vital organs are, as it were—not transiently, but—perpetually blushing and blanching under deficient brain-control over the lower nerve-centres."

Strangely enough, the most common symptoms of nerve-disorder in women are the very ones which lay tradition and dogmatic empiricism attribute to womb disease. They are, in the order of their frequency, great weariness, and more or less of nervousness and of wakefulness; inability to walk any distance and a bearing-down feeling; headache, nape-ache, and backache; scant, or painful, or delayed, or suppressed menstruation; cold feet, and an irritable bladder; general spinal and pelvic soreness, and pain in one ovary, usually the left, or in both ovaries. The sense of exhaustion is a remarkable one; the woman is always tired, she passes the day tired, she goes to bed tired, and she wakes up tired, often, indeed, more tired than when she fell asleep. She sighs a great deal, she has low spirits, and her arms and legs become numb so frequently that she fears palsy or paralysis. There are many other symptoms of nerve-strain, but since they are not so distinctively uterine, and, therefore, not so mialeading, I shall not enumerate them.

Now, let a nervous woman, with some of the foregoing group of symptoms recount them to a female friend, and she will be told that she has womb-disease. Let her consult a physican, and ten to one he will think the same thing and diligently hunt for some uterine lesion. If one be found, no matter how trifling, he will attach to it undue importance, and treat it heroically as the peccant organ. If no visible disease of the sexual organs be discoverable, he will lay the blame on the invisible endometrium or on the unseeable ovaries, and continue the local treatment. In any event, whatever the inlook or the outlook, a local treatment is bound to be the issue.

Until my eyes were opened to the harlequin tricks of the nerves, I have repeatedly made the same mistake, and I now see it made over and over again by other physicians. To give but two recent instances out of very many:

Not long ago a lady was sent to me by a very intelligent physican to have a cervical tear repaired. She had been seen by several physicians, all of whom had treated her locally, and all had concurred in the opinion expressed by my friend. Her most pronounced symptoms were insomnia, unending weariness, excessive nervousness, great dread of being alone, severe bearing down, painful locomotion, constant backache, and an extremely irritable bladder which gave her no peace day or night. She had in addition most of the canonical uterine symptoms. Being sure that a comparatively trifling tear of the cervix could not give rise to so many exacting symptoms although she herself attributed them to this cause, I closely cross-questioned her, and soon discovered the source of the mischief. After a rather difficult labor—her sole one—she had given birth to a still child. This was a great disappointment, yet she was convalescing naturally, when a great conflagration broke out in her city. After destroying most of this city it swept onward toward her house. Her valuables were hastily packed up, and she was bundled up ready to be carried away at a moment's notice. Fortunately the fire was put out at the second house from hers. Since then she has never been well.

It was not the cervical tear that had wrecked her health, but disappointed motherhood, and the noise, the tumult, the fear, the long-drawn-out agony of suspense.

The second case gave the following history: She was aged forty-two years, and was the mother of one child, now twelve years old. She had sharp pain in the right ovary, burning aches in the left one, and difficult locomotion. A sensating of tingling, prickling, and stinging heat pervaded her whole left side. Her left eye had wavering vision, as if she were looking through heated air. The catamenia, formerly scant and painful, were replaced by an abundant leucorrhœa. Her bladder was irritable and needed emptying day and night. She was tired all the time, lay awake most of the night, and her sleep was troubled by distressing dreams. A well-known oculist had cut the muscles of her eyes, several physicians had treated her locally off and on for many years, and she was now sent to me to decide the qestion of the removal of her ovaries. The womb lay in the first stage of retroversion, there was some endometritis, and the left ovary was tender and reachable. Finding, as in the foregoing case, that her symptoms were out of all proportion to the local lesions, I suspected nerve-trouble, which her history confirmed. Ten years ago, while sailing with her husband across a lake, a storm overtook them. The boat filled with water and, after a desperate struggle, they barely reached the shore. Two years later her nerves, still much shaken by this narrow escape from drowning, received another shock. A burglar broke into her home, and her husband had, in her hearing, a fierce and noisy hand-to-hand fight with him. One more year passed, and she met with a railroad accident, in which twelve persons were killed, but she was uninjured. This final shock completely shattered her nervous system, and she was plainly suffering from a sore brain, and not from sore ovaries. In one word, it was the old, old story of wounded nerves counterfeiting a wounded womb.

I have learned yet another trick of the nerves: that when riotous from being under-fed, from over-work, or from lack of discipline, they billet themselves, like an insolent soldiery, on some maimed organ and hold high revel there. For instance, a woman, hitherto in perfect health, may have an adherent or a dislocated ovary, or a torn cervix, or a narrow cervical canal, or a slight displacement of the womb—lesions which may have given her no appreciable trouble whatever. But let her nervous system become unstrung, and at once, through disturbances in the circulation both of the nerve-fluid and of the blood-fluid, there set in vesical, uterine, or ovarian symptoms, which may indeed reach so exacting a pitch as to demand a local treatment. Nor are the sexual organs the only ones thus affected. Every weakened organ in the body is liable to such functional outbreaks. The stomach rejects its food, the bowels either refuse to act or else they are very loose, the heart loses it rhythm and beats irregularly, the vocal cords relax and the voice cannot be raised above a whisper, and almost every sphincter muscle in the body behaves as if it were insane. I have known a woman in her nervous attacks to become as jaundiced as if she had the liver of a Strasburg goose. The yellow color was fugitive, but it lasted longer than the emotion that caused it. Even the eyes, which before may have exhibited to their owner no visual defect, now blink painfully at the light or may cause violent headaches, which glasses alone can allay. In the following case various organs were thus affected:

An unmarried lady in splendid health and with a magnificient physique, had unusual muscular strength, which she was fond of testing. One day, while wrestling with her brother, which she often did, she felt something give way in the pelvis, and shortly after this her health began to fail. Her monthly periods, hitherto painless, now gave her acute suffering, and a persistent leucorrhœa soiled her linen. The left ovary throbbed with a constant ache, walking became painful, the bladder grew irritable, and the stomach began to reject its food. From sluggish circulation, local congestions took place, particularly in the head and in the pelvis. Thus when she stood up, the pelvic organs seemed to fill up with blood and painful pelvic throbs beat time with her pulse.

From these she got relief by sitting with her knees raised up, or by lying with her feet higher than her head. Soon insomnia, photophobia, and dreadful headaches set in. These were followed by illusions when her eyes were closed, which vanished when she opened them. She heard imaginary conversations and saw unpleasant sights. She became morose and irascible, and kept much by herself; in one word her mind hovered on that ill-defined borderland between sanity and insanity.

The wrestling episode and her many orthodox uterine symptoms misled every one, including herself, her family, and several physicians, who attributed everything to uterine disease and treated her accordingly. She had much local treatment of the usual kind, and more for supposed anteflexion. Getting no better, she travelled many miles to consult me. My examination of her revealed merely glairy mucus in the cervical canal, some tenderness over the left ovary, which was slightly displaced, and the natural anteflexion of a virginal womb. These lesions were too trivial to account for her lamentable condition, and I looked to her history for an explanation. This clearly satisfied me that she was suffering from nerve-breakdown. This diagnosis was a great surprise to her and to her mother, who accompanied her; but, notwithstanding her contrary convictions, she entered my private hospital. With the exception of a few douches of corrosive sublimate for the leucorrhœa, her uterine organs were let severely alone, and she was treated merely for her nerves. Her friends were greatly dissatisfied with this treatment, and at their instance a near medical relative wrote me a letter in which, after criticising my treatment, he urged upon my attention the wrestling match and the uterine character of the symptoms. At the end of six weeks she left me very greatly improved in every respect, but as her headaches still troubled her more or less, I asked Dr. de Schweinitz to examine her eyes. He found some astigimatism in one eye, and "the highest degree of hypermetropia which he had ever seen, excepting in two other cases." Suitable glasses remedied these defects, and she afterward progressively improved —so much so, that eight months later I received from her a most grateful letter of thanks. Further, the physician himself who had criticised my treatment of her, wrote me quite recently, that he was about to send me a patient with analogous symptoms, who had been unrelieved by a long course of uterine treatment.

Just as headache does not necessarily mean brain disease, so ovary-ache does not necessarily mean ovarian disease. Yet time and again—and I say this deliberately—have ladies been sent to my private hospital to have their ovaries taken out, when the whole mischief had started from some mental worry. Their ovaries were sound, but their nerves were not, and no operation was needed for their cure. So misleading, indeed, are the symptoms of a jaded brain or of other nerve-strain, under the uterine livery in which they are often clad, that I have recently known a jilted maiden to be treated by a cup-and-stem pessary, and a bereaved mother to be douched and tamponned and cauterized for a twelvemonth. Such cases, even when accompanied by actual uterine disease, are not bettered by merely local treatment. Nor are medicines by themselves of much avail. What they need is massage, perhaps electricity, and that freedom from care which strict seclusion gives. Hope should be infused into every case, and, above all, there must be imported into it the personality of the physican. It was not the staff of the prophet that awakened the dead child; but death was quickened into life when the prophet threw himself upon its body and breathed into it of his own intense vitality.

As the outcome of much that I have learned to unlearn, I have arrived at this very short gynecological creed: I believe that the physician who recognizes the complexity of woman's nervous organization and appreciates its tyranny, will touch her well-being at more points and with a keener perception of its wants, than the one who holds the opinion that woman is woman because she has a womb.—*Med. News.*

THE ANTI-FERMENTATIVE TREATMENT OF INFANTILE DIARRHŒA.

Infantile diarrhœa may be a symptom of many diseases, such as dietetic, parasitic, tubercular, syphilitic, miasmatic, and local diseases, or it may result from diseases of defective nutrition. I propose in this communication to discuss only the causation and the treatment of that variety of acute infantile diarrhœa that is caused by irritative products resulting from fermentations produced in milk either previously to or after ingestion. The majority of the cases of this kind occur in infants who are being reared on cow's milk, and, although they occur at all seasons of the year they are far more common during the summer. The infant is restless and irritable; the tongue is generally coated with a white fur; the diarrhœa is severe, and is frequently accompanied with vomiting and signs of abdominal pain; the motions are watery, usually greenish at first, with lumps or flocculi of curd in them; later they may become lighter in color, or even may resemble the rice-water stools of cholera or of arsenical poisoning. In some of the cases marked nervous prostration is present. The causation of this variety of acute infantile diarrhœa has been attributed by various

authors to indigested caseine, to the action of bacteria, to acid fermentation, to alkaline fermentation, to poisonous ptomaines, or to catarrh of the intestinal mucosa, set up by the above-mentioned or other irritants. Bednar was one of the earliest writers who put forward the theory that primary abnormal decomposition of food was a cause of diarrhœa in children. Escherich found by the aid of Koch's method of cultivation that the bacterium lactis determined strong lactic acid fermentation in carbohydrates, and especially in milk sugar, but that this bacterium does not split up albumen. On the other hand, according to Baginsky, in a paper read before the Berlin Medical Society in 1888, the bacterium produces only very small quantities of lactic acid ; moreover cultivation experiments show that the formation of acetic acid, when it exceeds a certain limit, destroys this bacterium, so that if the bacterium be sufficiently active it dies, so to speak, by its own hands, killed by its own products. Experimentally, it is found that a trace of calomel in the gelatine prevents almost entirely the growth of this bacterium, and this may explain the undoubted usefulness of calomel in sudden diarrhœa in the children, due apparently to fermentation of milk sugar in the milk-supply.

Now, although I do not for a moment deny that several irritating substances resulting from the fermentation of milk may be factors in the production of this form of acute infantile diarrhœa, yet my contention in this paper will be that the principal share of the blame rests with the milk or cheese ptomaine, tyrotoxicon, produced during the fermentation of milk under certain conditions. I will, therefore, here give a brief description of this body. In 1883-84, 300, cases of cheese poisoning were reported to the Michigan State Board of Health. The symptoms were vomiting, diarrhœa with watery stools, occassional pain in the region of the stomach, tongue at first white, red and dry later on, pulse feeble and irregular, countenance pale with marked cyanosis ; dryness and constriction of the throat were complained of by all, and in a few cases the diarrhœa was followed by marked nervous prostration. In the majority of the cases no fatal termination occurred. From the symptoms many of the cases were at first diagnosed as arsenical poisoning. In all these cases the cheese was apparently in good condition, and there was nothing in the taste or odor of it to excite suspicion. From some of this cheese Victor Vaughan extracted a crystalline ptomaine which he named " tyrotoxicon," and which he found was capable of producing the symptoms described above as characteristic of poisonous cheese. He later on extracted tyrotoxicon from milk that had stood in stoppered bottles from three to six months. He found that tyrotoxicon administered to a cat produced vomiting and watery stools, with subsequent immediate retching and vomiting whenever it lapped a little milk. This condition continued for three days, when the animal was placed under ether and its abdominal organs examined The stomach and intestines contained a frothy, serous fluid, such as had formed the vomited matter, and the mucous membrane was very white and soft ; there was not the slighest redness anywhere along the alimentary canal. Similar results in several other experiments on lower animals were obtained by the same observer. It may be mentioned here that the chemical constitution of tyrotoxicon is known; it has been shown by Victor Vaughan to be identical with diazobenzol ($C_6H_5N_2$)

Many remedies have been employed in the treatment of infantile diarrhœa with the view of arresting the abnormal intestinal fermentation. Carbolic acid, creasote, resorcin, salicylate of soda, salicylic acid, naphthol, and salol have been given as antiseptic remedies in the hopes of checking the abnormal fermentative changes going on in the bowels. Ringer recommends a weak solution of bichloride of mercury in acute or chronic diarrhœa of children with very slimy stools,and accompanied by pain and straining ; the salient indication, according to him, for employing the bichloride of mercury, is the slimy character of the motions. In some forms of infantile diarrhœa, characterized by watery, very offensive, muddy looking or green colored stools, Ringer recommends small doses of grey powder. Illingworth uses for infantile diarrhœa a mixture containing perchloride of mercury, iodide of potassium, carbolic acid, sal volatile, and paregoric. This is a most useful combination, and it was the employment of it that first directed my attention to the treatment about to be described in this paper. Dr. Angel Money has recently drawn attention to the temporary value of naphthaline as an antiseptic in cases of infantile diarrhœa and of fetid urine. Dr. Edward P. Davis of Philadelphia, in a recent clinical lecture on the treatment of infantile diarrhœa, points out that it is of prime importance that the milk should be sterilized, and also advocated in cases of pronounced gastric irritation the washing out of the stomach with water containing either bicarbonate of soda or salicylate of soda ; as an intestinal antiseptic he recommends small doses of calomel, or as a final resort, intestinal irrigation with water made alkaline with bicarbonate of soda, or with thymol solution (1 in 1000),or with salicylate of soda solution (20 gr. to 20 oz of water). Dr. Koblasenko, in a Russian medical journal, states that he has found great advantage from the use of zinc oxide in the summer diarrhœa of children ; he gave the zinc oxide in a mixture with ether and tincture of rhatany.

The treatment that I have lately employed in

these cases consists of (1) drug treatment and (2) diet treatment.

1. If the view that I entertain be the correct one—viz., that the milk ptomaine tyrotoxicon is one of the main factors in the causation of the diarrhœa—then the rational treatment will be to destroy or to render insoluble, and therefore inert this substance, and at the same time to stop the abnormal fermentative changes occurring in the stomach and intestines, and so arrest further production of this and other irritating chemical bodies. Now, can any one drug combine these two functions? Yes, in the soluble biniodide of mercury we have a drug which renders the milk ptomaine insoluble and inert, and which at the same time is one of the most powerful, if not the most powerful, of antiseptics. But, it may be asked, what advantages: (*a*) The soluble biniodide of mercury precipitates the milk ptomaine tyrotoxicon by forming an insoluble double iodide with it; bichloride of mercury is powerless to precipitate the milk ptomaine. (*b*) The soluble biniodide of mercury is a much more powerful antiseptic than the bichloride of mercury. (*c*) The soluble biniodide of mercury is a safer drug than the bichloride of mercury, in that it is more rapidly eliminated from the system than the latter preparation. This is explained by the facts that the bichloride of mercury after it has passed into the circulation becomes converted into insoluble or partially insoluble compounds, both by the albumen and by the carbonate of soda of the blood (an albumate of mercury and a carbonate of mercury being respectively formed), and that in consequence the mercury becomes deposited in the various tissues, and so by not being speedily eliminated from the system, may produce toxic effects. This disadvantage is not possessed by the soluble biniodide of mercury, which is not precipitated either by the albumen or by the carbonate of soda of the blood, so that there is consequently no danger of its being deposited in any of the tissues; and, as a matter of fact, after absorption into the circulation, it is rapidly eliminated by the kidneys. This rapid diffusibility through the system and elimination of the soluble biniodide of mercury in the urine I have been able to prove in the following manner. A male adult, who had not previously taken mercury, came under my friend Mr. Hastings Stewart to be treated for secondary syphilis. A subcutaneous injection of three quarters of a grain of the soluble double iodide of mercury and potassium was administrated, and within two hours of the injection I was able, after careful analytical search, to find a small quatinty of mercury in the urine. It was on acconnt of its property of precipitating the milk-promaine tyrotoxicon, and so rendering it insoluble and inert, and on account also of its powerful germicical action, that I was first led to employ the soluble biniodide of mercury in the treatment of infantile diarrhœa. I have always prescribed it together with chloral hydrate, the latter being employed as a sedative to the irritated and possibly inflamed mucous membrane of the stomach and intestines, and also on account of its action on the muscular walls of the intestine in diminishing exaggerated peristaltic action. The form in which I prescribe it is as follows: ℞.—Liq. hydrarg. perchlor., ♏lxii; potass. iodid., gr. ¾; chloral hydrat., gr. j.; aquam ad ℥j. This forms the teaspoonful dose, which in case of infants up to six months of age may be given every four hours, and for infants from six to twelve months of age every three hours; children more than one year old may take two teaspoonful doses. This mixture contains the biniodide of mercury dissolved in the excess of iodide of potassium as a soluble double iodide of mercury and potassium; every teaspoonful of the mixture contains one-fiftieth of a grain of biniodide of mercury. Taking into account the irritant action of most of the persalts of mercury, it might be imagined that the binodide of mercury itself would possibly act as an intestinal irritant. I have, however, never found this to occur in any one of the cases in which I have employed it, and this I attribute to its extreme solubility and diffusibility, and to its rapid elimination by the kidneys I have by me the records of eighty cases of acute infantile diarrhœa that I have treated by the biniodide of mercury method. In all the cases the diarrhœa was severe, and in many of them was accompanied by vomittng with signs of abdominal pain, and in a few of the cases by marked nervous prostration; the ages of the infants varied from three weeks to eighteen months. The results, briefly stated, are as follows:—In seventy-two of the eighty cases the diarrhœa ceased within two or three days; in five of the remaining eight cases it ceased within four days; and in no case did it last over seven days.

2. As regards the diet treatment, if milk is to be given I always direct that it should be previously boiled; and here let me remark that boiling the milk not only destroys germs but also rapidly decomposes any of the milk-ptomaine tyrotoxicon that may have been formed, the tyrotoxicon splitting up on boiling into carbolic acid and nitrogen. In the majority of cases during the continuance of the diarrhœa I order one part of boiled cow's milk to be mixed with three parts of barley water, sweetened with milk sugar or with saccharine. I advise the mothers that the various parts of the feeding bottle when not in use should be kept in a weak solution of permanganate of potash, which is not only a powerful germicide, but since all ptomaines are rapid reducing agents, they become speedily destroyed by the oxidizing powers of the permanganate. I also endeavour to get the mothers to use the old-fashioned torpedo-shaped

feeding bottle, in which no india-rubber tubing, the favorite lurking place of germs and other abominations, is employed.—Arthur P. Luff, in *Lancet*.

THE DIARRHŒA OF CONSTIPATION.

In the course of his remarks on a case that was presented for treatment at the Medical Department of the Polyclinic, Prof. Solomon Solis Cohen, alluded to the frequency of the condition, which has been called "the diarrhœa of constipation." The patients, as in the case before the class, frequently state that they have had chronic looseness of the bowels for many years. The immediate cause for seeking advice is usually paroxysmal pain, which may simulate hepatic colic, or as in a case recently seen in private practice, may simulate renal colic. The so-called diarrhœic stools should be carefully examined, and the history carefully inquired into, with the minuteness of a legal cross-examination. The true facts will then be found at variance with the patient's statements. There will be much desire to go to stool rather than frequent passages; and the amount of fæcal matter passed will be found to be very small. The passages are small, thin, serous, foul-smelling, sometimes bloody, usually containing much mucus. Scybala will occasionally be passed, usually with much pain and difficulty. They are commonly glazed with a glairy mucus, and often faintly blood-stained. In other words there is a condition of irritation of the bowel, with insufficient evacuation of the contents. Frequent attempts at defæcation, bnt little result. The paroxysmal pains are due to distension, traction and pressure. When the patient has been in the habit of taking opium mixtures to relieve the supposed diarrhœa, the abdomen may be found greatly distended from paralysis of the intestinal muscular-layer. The percussion phenomena will be mingled tympany and dullness, the distribution of the sounds depending on the location of masses of fæces in the bowel. Usually the ascending and transverse colon will be found filled, and the transverse colon may be seen to be much dragged down. Pains in the chest may be caused by traction upon the diaphragm. Enlargement of the liver, or ascites, may be mistakenly diagnosticated, unless care is taken to map out the dullness accurately, and not to be misled by the apparent fluctuation of the relaxed intestines. Headache, vertigo, languor, anorexia (sometimes bulimia), nausea, vomiting, are among the chronic or recurring symptoms, other than those already mentioned. The first thing in treatment is to thoroughly wash out the bowel. This may require several irrigations, supplemented by massage of the abdomen. When there is no absolute impaction, calomel may be given in single daily doses of five grains, with soda or aromatic powder, continued for two, three, or four days. Olive oil in large doses and castor oil may also be given by the mouth; or warmed and thrown as high as possible into the bowel an hour or two before the irrigation. After the bowel has been emptied a tonic-laxative pill should be prescribed for continuous use for long periods, with occasional resort to calomel, oil, and salines.

A good formula is as follows:

℞.—Euonymin . . . . . gr. ij.
Ext. ignatiæ . . . . . gr. ss.
Ext. belladonna . . . gr. $\frac{1}{6}$.
Piperini . . . . . gr. j.

M.—S: One pill three times a day, after meals.

The number of pills daily, or the size of the doses, may gradually be reduced as improvement is manifested. Resin of podophyllum, leptandrin, iridin, and the like may be used with, or instead of, the euonymin. Extract of cascara sagrada is very often useful. The dose is from two to five grains. The ignatia may be replaced by strychnine or nux vomica, the belladonna by hyoscyamus. The commonly used pill containing aloin or aloes is not often useful, and the hemorrhoidal condition present often contra-indicates it. Ipecacuanha is often usefully combined with the other agents.

The diet should be carefully regulated. At first it should be restricted to milk (peptonized, or with digestive agents added), beef-tea as a stimulant, thin soups, coffee, and the like. After a little while, when the intestinal irritation and catarrh have subsided, meats and vegetables may be added. Bran bread and other substances intended to assist peristalsis by irritation should not be given. Laxative fruits may be eaten in moderation. Pastry, sweets and other indigestibles are to be avoided. Plenty of water, preferably hot water, should be drunk. Enemata may be required from time to time, to wash out accumulations, and at first should be given daily, then on alternate days, then weekly as a routine practice. Abdominal massage and faradization of the intestines are of great service.

It is quite evident that treatment of the apparent diarrhœa by astringents and opiates is a mistake, and yet this practice is so common as to render it worth while to caution against the error, and to insist on careful examination of the patients. There are other cases of apparent diarrhœa and colic which may turn out to be something quite different on examination. "Walking typhoid fever" is familiar to all; but it is not as generally known as it ought to be, that serious and even fatal results have occurred in cases of perforating appendicitis and other inflammations in the neighborhood of the cæcum, as a consequence of neglect, due to insufficient inquiry into the case. We should never accept a patient's

diagnosis, until our own investigations have proved it to be correct.—*Times and Reg.*

MEDICAL NOTES.

Prof. DaCosta recommends the use of hydrobromate of hyoscine in doses of $\frac{1}{2}$ gr. for the tremor of *paralysis agitans.*

In a case of *spinal epilepsy*, Prof. DaCosta prescribed :

℞—Tinct. belladonnæ, . . . gtt. iij.
Sodii bromidi, ... gr. xv.—M.
Sig.—Use t. d.

Prof. DaCosta advises as a prophylactic for those exposed to *scarlatina*, acidum carbolicum, gtt. j., three or four times a day, in addition to antiseptic gargles for the throat and antiseptic baths for the whole body.

The following was given to a woman who was troubled with *habitual constipation :*

℞—Aloin, ... gr. $\frac{1}{3}$.
Ext. hyoscyami, ... gr. j.
Ext. rhei, ... gr. ij.
Olei cajeput, ... gtt. j.—M.
Ft. pil. Sig.—Such a pill every night at bedtime.

For the *itching of jaundice*, Prof. DaCosta advised sodii bromidum with antipyrin internally, with the following ointment externally :

℞—Menthol, ... gr. xx.
Alcohol, ... ℥ ij.—M.
Sig.—For local use.

A man who presented himself at the clinic suffering from *rheumatoid arthritis*, was ordered this ointment for local use, after blisters and massage of the joints had been first used :

℞—Iodi, ... gr. xx.
Ung. belladonnæ,
Petrolati, ... āā ℥j.—M.

A man suffering from *rheumatism*, in whom the acute stage had just been passed, was given—

℞—Potassii iodidi, ... gr. v.
Potassii acetat., ... gr. x.
Tinct. colchici sem., . . . gtt. x.
Elix. simplic.,
Aquæ, āā q. s. ad. f ℥ j.—M.
Sig.—Use every four hours, with Dover's powder at night.

Prof. Parvin said that in the *extirpation of the vulvo-vaginal gland*, in Paris, the operators melted paraffine over a water-bath and injected it into the gland, immediately placing a small piece of ice over it. This fills the sac, making the extirpation, otherwise difficult comparatively easy.

In cases of *alopecia* resulting from some continued fever, Prof. Bartholow advised the use of the following as a local tonic :

℞—Ext. jaborandi fluid,
Tinct. cantharidis, ... āā ℥ ss.
Glycerini,
Olei vaselini, ... āā ℥ j.—M.
Sig.—Apply locally with a sponge at night.

In a case of *catarrhal jaundice*, Prof. DaCosta prescribed small doses of calomel with bicarbonate of soda frequently repeated. In the mornings the patient was to take a half ounce of Rochelle salts and drink some of the mineral waters. Saccharine and starchy substances were to be avoided, and a blister was placed over the enlarged gall-bladder.

Prof. Roberts Bartholow recommended in cases of *impotence* the following :

℞—Zinci phosphidi, ... gr. ij.
Confect. rosæ, ... ℈ j.—M.
Ft. massa et div. in pil. xxiv.
Sig.—One to three pills thrice daily.

Or—

℞—Ferri arsenitis, ... gr. v.
Ergotini (aq. ext.), ... ℥ ss.—M.
Sig.—One night and morning.

Prof. Parvin, in his clinic at the hospital, suggested a new mode of suture to be used in *colporrhaphy.* Instead of tying each suture as it is inserted, he thinks it a very good idea to place a needle on each end of a long catgut suture, and after inserting at one end of the denuded part and drawing through to the middle of the catgut suture, to tie. Then, without cutting, begin to sew from each side, tying at each insertion of the two needles. In this way you take a "cobbler's stitch," which not only holds the parts thoroughly in apposition, but is quite strong.

In a case of *parenchymatous nephritis*, in a boy six years of age who had been taking Basham's mixture, followed by infusion of digitalis and acetate of potash with no result (the accumulation of fluid becoming so great that his abdominal cavity had to be tapped, and his scrotum pricked with a fine needle), Prof. DaCosta prescribed tinct. strophanthus, gtt. j, increased to gtt. iij, three times in a day, and in addition the following formula :

℞—Caffeini citrat., ... gr. j.
Sodii benzoat., ... gr. iij.
Syrupi limonis,
Aquæ, āā q. s. ad. f ℥ j.
Sig.—Such a dose three times daily.
—*Coll. and Clin. Rec.*

THE TREATMENT OF CHRONIC RHEUMATISM.

Chronic rheumatism, including chronic articular rheumatism, and all varieties of muscular rheumatism under that heading, is a very troublesome complaint, but a very important one, owing to the large number of people, especially amongst the poorer classes, who suffer from it. The treatment is, therefore, one to be carefully considered; and in this short article I propose to give a brief *resumé* of the methods of treatment I have found most beneficial.

The clothing of the patient must be attended to. It is essential that flannel should be worn next to the skin. The Jäeger underclothing is very good. The diet should be nourishing, and, if stimulants are required, a little whiskey is, perhaps, the best. The internal treatment adopted is very various. I have found the following prescriptions most useful :—

℞.—Pot. bicarb. . . . . gr. xv.
Pot. iod. . . . . gr. iij.
Tr. hyoscam. . . . . ♏ x.
Spt. chlorof. . . . . ♏ v.
Inf. gentian. . . . . ℥ ss.
Ft. haustus, ter in die.

In strong adults, a few drops of vin. colchicicl is beneficial. I have seen good results from three grain doses of salicylate of soda three times daily. Guiacum is useful in some cases.

As the patient progresses a mixture like the following may be given :—

℞.—Ferri et ammon. cit. . . . gr. x.
Pot. iod. . . . . gr. iij.
Pot. bicarb. . . . . gr. xij.
Spt. chlorof. . . . . ♏ v.
Aqua pimentæ . . . . . ℥j.
Ter in die.

The syrup ferri iodidi answers well in some cases. If there be much pain opiates, especially given subcutaneously, are often of marvellous efficacy. If the patient is debilitated, cod-liver oil is useful.

Local Treatment—This is a most essential part of the treatment, and here we have a large variety of means.

1. *Counter irritation by blisters and liniments.*

2. *Baths* (hot-air, vapour, hot-water, and Turkish baths). Massage is useful in some cases. If much pain, hot fomentations will often relieve it.

Counter irritation : *blisters* are of more use in acute cases but sometimes are useful in the chronic form. Amongst *liniments* may be mentioned : camphor ; belladonna ; aconite ; oil of Eucalyptus is a most useful application, especially when continued with the belladona ; oil of wintergreen mixed with equal parts of olive oil is very efficacious. I have now used this formula for several years, and have already reported its use in *The Hospital Gazette*, *British Medical Journal*, *Lancet*, and my notes have been quoted in the *Philadelphia Medical Review*, and in Martindale's and Wescott's *Extra Pharmacopœia* for 1890. Its use is particularly beneficial in chronic cases attended with much pain, and if this liniment be well rubbed into the affected parts the pain generally stops for five or six hours after application. It has only failed to relieve the pain in an extremely limited number of cases.

The liniment composed with equal parts of olive oil and the ætherial tincture of capsicum is an old remedy recently revived by Sir James Sawyer. I have now used this application in about fifty cases, and in only two did the patients fail to derive any benefit. It is also a most useful topical application for neuralgia. It must be used with care, the patient being told to use it in very small quantities, to protect his hands when so doing—gloves are generally recommended—and the patient must be warned that none of the liniment gets into his eyes.

The treatment of chronic rheumatism is, however, at the best, not entirely satisfactory, and our patient will always have to be careful about exposing himself to wind and weather, and that he is warmly clad. We must also always remember that in these chronic cases of rheumatism we often discover cardiac murmurs on auscultation, even when there has been no previous symptom of cardiac mischief.—*Hosp. Gaz.*

MEDICAL EDUCATION.

The Minister of Education for Ontario took occasion in the recent address in connection with the Medical Department of the Provincial University, to defend the expenditure of public money for purposes of medical education, by pointing out that some of the most important discoveries in modern medical science have been made in institutions connected with the State. The argument is worthless for several reasons. In the first place, in order to estimate its value we should require to know the relative number of great scientific institutions of the kind referred to which are supported by the State, as compared with the number supported on the voluntary principle. If it should appear that nearly or quite all the great English and European medical colleges and laboratories are connected with State Universities there is manifestly no basis for comparison. The argument is merely equivalent to saying that these discoveries are generally made in connection with such institutions as really exist and not in connection with such as are non-existent. Nor does the fact that most of the great existing institutions on the other side of the Atlantic are aided or supported by the State prove anything with regard

to the possibility or otherwise of the existence of equally efficient institutions on voluntary foundations, since it is obvious that so long as the Government undertakes to do any specific work, whether belonging to its proper sphere or not, there is a little inducement for private individuals or societies to undertake the work. The Minister complained that objections were being made to the recent action of the Government to which he belongs in restoring a Medical Faculty to the University of Toronto. Having referred to the objectors it would have been but fair had he gone on to meet and answer their objections. This he scarcely attempted to do. The objections taken to the action of the Government in this matter are, if we understand them, of two kinds—general and specific. On general principles, a considerable class of objectors claim that a Government steps beyond its proper sphere and mis-appropriates the funds which belong to all its citizens, when it undertakes to provide for the education of those preparing for any one lucrative profession. The very fact that the medical profession is lucrative affords, it is forcibly urged, a sufficent guarantee that adequate provision will be made for furnishing the the training necessary to enter it. If it be said that the medical profession is peculiar, in that the health and lives of citizens are involved in its practice, and that the Government is bound to protect these by guarding the entrance to the profession against incompetent practitioners, the answer is—admitting for argument's sake the doubtful assumption that the State institution does or can effect this result—that all that is necessary to the end in view is for the State University to perform the functions of an examining body, in accordance with the original intention of the University of Toronto. The specific objection is, in this case, a very strong one, and the Minister should lose no time in answering it. It is to the effect that the Government is guilty of grave inconsistency and injustice, in that, after chartering several medical colleges, and receiving some of them into affiliation with the Provincial University, it actually erects one of those colleges into the Medical Department of that University, thereby, not only exhibiting unbecoming and unfair partiality to one of the several competing colleges in respect to which it was bound to observe the strictest impartiality, but itself entering into competition, at the public expense, with all the voluntary Colleges, some of which were in affiliation with its own University. The objection seems well taken, and it surely behoves the Minister to show that a course, seemingly so unfair and inconsistent, and so well adapted to discourage, instead of encouraging, private liberality, was justified by some urgent public necessity.—*The Week.*

CROTON-CHLORAL IN NEURALGIA.

The use of butyl-chloral hydrate in the treatment of imsomnia due to neuralgic pain is resorted to, in my belief, so rarely in this country that I have thought it worth while to call attention to its interesting action and relative value and safety.

Physiological experiment coupled with practical experience has convinced us all that chloral, while it is the best hypnotic for the majority of cases, is not one which will give sleep in painful affections or relieve neuralgia unless it is given in full doses, so full as to be dangerous. At the same time it is very desirable that we should have some preparation at hand which will both produce sleep and relieve pain. At present we use chloral and morphine together—the first for its somnifacient effects ; the second to relieve the pain, and also to cause sleep. A very great advantage of butyl-chloral hydrate is its safety. The active dose for many cases of neuralgia is only 5 grains, given in pill-form, yet as much as 40 grains may be used without producing any more noteworthy effects than 20 grains of ordinary chloral so far as the heart and respiration are concerned.

The following case is of interest, as showing its advantages :

M. G., aged thirty-five years, has had, for over two years, a severe supra-orbital neuralgia, varying in intensity, and accompanied by roaring in the ears and loss of appetite and sleep. The cause of the neuralgia rests in the presence of middle-ear disease, with varying amounts of discharge. The Eustachain tubes are widely dilated and relaxed. The neuralgia is always worse when the discharge becomes in any way suppressed, and the branches of the entire trifacial nerve become involved in the painful neuralgic shootings. At this time it is impossible for the patient to go to the front door, as the noise of the street hurts her head so much as to make the pain unbearable. The loss of strength and flesh was considerable, owing to the decrease in appetite and loss of sleep. Five grains of butyl chloral hydrate were ordered every two hours in pill-form. Six pills were taken, with entire relief of all the symptoms and the attaining of good sleep and a better appetite. The effects of each dose lasted twenty-four hours, and then the pain required another six pills. She had no attacks for some weeks after this, although the ear was not discharging.

Functional insomnia resting upon no known cause also yields to this drug very well, but insomnia due to any advanced systemic lesion, as in phthisis, is not relieved in every instance under its use. The history of cases of phthisics who use the drug is that they sleep well the first night, and lie awake the second night to cough the lungs clear

of mucus which has accumulated during sleep and while the nerves are obtunded by the drug. This second sleepless night can be quieted by a large dose, 20 grains, if desired, but I have never wished to run the risk of choking up the lung by preventing expectoration. In the neuralgia of phthisis and anæmia the drug is very servicable.

Neuralgias of other nerves than the cranial are rarely benefitted by butyl-chloral; but it is worthy of note that it may sometimes give relief in such cases by using with it 10 or 15 drops of the tincture of gelsemium.

In migraine, sick headache, and bilous headache, Ringer has recommended it, and in true migraine with hemianopsia it is certainly one of the most useful remedies along with antipyrine and cafeine, cannabis indica and gelsemium.

Curiously enough, while it cures the neuralgia due to a carious tooth, it does not cure toothache.

A great advantage possessed by croton-chloral is the applicability of moderate doses in cases of heart disease.—Dr. Hare, in *Med. News.*

THE CURE OF ANEURISM BY INDUCING THE FORMATION OF WHITE THROMBI WITHIN THE SAC.—Dr. William Macewen in a paper on this subject (*Brit. Med. Jour.*), thoroughly explains his method of introducing a fine, highly-polished needle through the wall of the sac, and irritating the lining membrane at a point opposite that of introduction. Not only may this be done, but without removal of the instrument the wall may be irritated at various points. The pin should never be used for more than 48 hours, and its introduction should be guarded by great antiseptic care. By this procedure the white corpuscles are segregated from the stream, and there is as well a proliferation of the cells of the walls of the vessel. The irritation must be of the slightest nature. The clot which forms at the point of irritation differs from the red clot which follows electrolysis, introduction of wire, slowing the stream, etc., from the fact that it becomes organized, which Dr. Macewen believes rarely occurs in red thrombi. The organization of the white thrumbus is due to its getting a blood supply from the vasa vasorum. The principle is applicable to any aneurism which can be defined and only requires extreme cleanliness. Care not to injure the coats of the vessel by too much scratching, or too many punctures, and an avoidance of important structures which may lie on or near the sac. In support of this treatment the following cases are given: (1) Aortic aneurism seen at advanced period when threatened with impending death from dyspnea, treated by induction of white thrombi within the sac. Death one month after. *Post-mortem* examination showed the interior of the aneurism to be filled to two-thirds of its extent by firm white thrombi. (2) Aneurism of the upper part of the right femoral, involving external iliac, measuring five inches in diameter, cured by induction of white thrombi. Patient died thirteen months subsequently from carcinoma of the tongue. *Post-mortem* examination showed the aneurism was obliterated; a mass of vascularized connective tissue represented the sac and its contents. (3) Aneurism of abdominal aorta treated by induction of white thrombi in interior of vessel; cure interrupted by patient feeling so well that he determined to resume work after about a month's treatment, though tumor not consolidated. Patient still alive two years and a half after. (4) Intrathoracic aneurism. Subclavian of left side, accompanied by great swelling, pain, numbness, and loss of power in the left arm. Treated by induction of white thrombi within sac; complete consolidation of aneurism and restoration of function of arm. No anesthetics were used during the operations, and very little pain was felt. In conclusion, Dr. Macewen trusts that his method will not be used in hopeless cases, or indiscriminately, as such a course will only bring it into discredit. He considers this caution necessary on account of the extreme ease of the operation, and the lack of any necessity for particular anatomical knowledge for its performance. —*Occidental Med. Times.*

THE BLOOD-SUPPLY OF NERVES.—At a recent meeting of the Academy of Sciences an interesting communication was made by MM. Quénu and Lejars on some new points in the vascular distribution in nerves. Having hit upon a novel and special method of injection, they were able to recognize in the circulatory apparatus of certain nerve trunks a series of constant dispositions hitherto little, if at all, noticed. So far their investigations have been concerned with the cervical portions of the vagus and parts of the great sympathetic. They show that the recurrent laryngeals, together with the adjacent cervical portions of the pneumogastric and sympathetic, have their blood-supply from the thyroid arteries exclusively, and the authors suggest that herein may be found a ready explanation of the aphonia as well as the respiratory and vaso-motor modifications which are observed sometimes to follow thyroidectomy and ligature of the common carotid or thyroid arteries, and they deem it not unlikely that this fact of common blood-supply may be an element in the pathology of certain forms of Graves' disease. The veins of these nerves are more abundant than the arteries, and do not always play the part of satellites to these latter, but after forming a plexus on the ganglia of the sympathetic and pneumogastric, they empty themselves into either the network of the vasa vasorum of the common and internal carotids, creating thus an intimate

connection between the wall of the artery and the nerve trunks which accompany it, or they join the thyroid veins, and especially a network of veins which covers the lateral wall of the pharynx; while others open into the veins in front of the vertebræ and into those of the pre-vertebral muscles. This connection of the veins of the nerve vascular system with muscular veins was found also to exist in the case of the limbs, and the authors submit that if it be allowed that muscular contraction is a factor in the circulation in small peripheral veins, it is evident that the anatomical peculiarity observed is calculated to aid favorably the expulsion of venous blood from the nerve trunks. The writers finally suggest that the abundant blood distribution in nerves may readily conduce to congestion, and that this, in its turn, may not be without importance in the pathology —as yet but little known—of neuralgia.—*Lancet.*

GUAIAC AS A LAXATIVE.—Murrell (*Med. Press and Circular*) thinks that guaiac is a valuable laxative. His attention was drawn to the subject, two years ago, by casually prescribing guaiac lozenges made up with black-currant paste, for a man suffering from rheumatism. The man continued taking the lozenges long after the pain had ceased, and in explanation said that they did him good by acting on the liver and bowels, and said that one or two of the lozenges taken in the morning before breakfast, produced a stool promptly, and without inconvenience. The author ordered the lozenges for others of his patients suffering from constipation, and what is conventionally called "billiousness," and the results were equally satisfactory. The lozenges not being available for hospital use, he had a confection prepared containing ten grains of guaiac resin to one drachm of honey. This, for the last two years, he has used extensively, not only as a purgative, but in the treatment of chronic rheumatism, sciatica, tonsilitis, dysmenorrhœa, and allied affections. He gives from one to two drachms three times daily. The purgative effect is very pronounced, and in one case the patient had fifty-six evacuations in one week. In another case it produced a well-marked rash, covering the arms and legs with an eruption which forcibly reminded one of a copaiba rash. It was accompanied by intense itching which disappeared on discontinuing the drug. The guaiac not infrequently gives rise to a burning sensation in the throat, and to obviate this he prescribes ten grains of the resin in half an ounce of extract of malt. He believes that a trial of guaiac, either as a laxative or purgative, according to the dose employed, will be found satisfactory. It is possible that if the drug were triturated with cream of tartar, or with some inert substance, such as sugar of milk, its efficacy would be increased, and that it would produce the desired effect in smaller doses.—*London Medical Recorder.*

THE Polish count who was brought into court for sequestering four children, and rearing them as animals, has been acquitted. It is reported that they had been confined each in a large, well-lighted and heated and ventilated room, well fed, and occasionally washed by a deaf mute; that they were unclad, never punished or restrained in any act; that two of the children have been confined thus, three, one four, and one four and a half years. The defence of the count was, that he was conducting a scientific experiment to learn what were the natural instincts and the intuitions really innate in the human species. The age of the children is not reported. They did not speak, and made barking, growling noises, and precipitated themselves upon their food like animals.—*Boston Med. and Surg. Jour.*

RESORCINE IN THE TREATMENT OF WOUNDS INFECTED AT POST-MORTEM EXAMINATIONS.—The deaths recently of several young practitioners in Germany, in consequence of blood poisoning following the receipt of slight wounds while making post-mortem examinations, has, according to a foreign contemporary, drawn attention to the question of the best means of treating these lesions. In this connection, Audeer, of Munich, has had good success with resorcine. Of all the antiseptics resorcine is, in his opinion, the most efficacious when used in these cases of blood poisoning. It is applied in the form of an ointment to the infected wound in a strength varying from five to fifty per cent. Vaseline is usually the excipient employed, but any other will do as well. Strong ointments of resorcine have a caustic action upon the tissues, and this being so, it is best to begin with the milder forms, say a half per cent., in order to obtain some anæsthesia of the wound. Then some hours afterwards a strength of from twenty to fifty per cent. may be applied, and the part may be covered with cotton wool. By this plan recovery rapidly ensues without pain, some desquamation of the part subsequently following.—*Med. Press and Circular.*

URINE OF OPIUM EATERS.—A statement has gone the round of the medical press, to some extent, that tincture of the chloride of iron added to the urine of an opium habitué will give a blue tint, as evidence of the presence of morphia. Dr. Mattison, of Brooklyn, whose experience makes authoritative what he says on the subject, states that this is not true.

Never be ashamed to own you have been in the wrong; it is but saying in other words that you are wiser to-day than you were yesterday.

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ERICHSEN'S DISEASE.

An attempt is being made in certain American professional circles to give the above patronymic title to the disease, or better the group of symptoms, first described by Mr. Erichsen, and otherwise known as "Railway Spine." The motives in this attempt are two-fold, one set of its promoters conceiving that they are doing the eminent surgeon an honor, the other, apparently most of them heads of the Medical Departments of some of the great American Railway Corporations, from desire to injure him, wishing, as one of them puts it, "not only to fix the name more accurately, but because a large amount of obloquy attends the subject which Erichsen ought to bear. His book is said to have cost English railways fifty million dollars, and American railways as much more."

Signs are not wanting in various quarters of a tendency towards the isolation of a separate branch of the medical profession, the Railway Surgical Staff, as distinct from their brethren as the Army Staff of any country is from the body of practitioners in civil life. Railway surgeons of course are only human, even those high up in the service of wealthy corporations; so one need not be surprised at finding *ex-parte* views taken of Mr. Erichsen's work, and unfair imputation of motives to the sufferers from the carelessness or ill-fortune of railway employees. In the *Journal of the American Medical Association*, Nov. 1, '90, a paper is published, entitled, "Legal Aspects of Spinal Concussion," read before the American Medical Association at its annual meeting in May last, by Dr. Clevenger, of Chicago. In the discussion that followed, a Dr. Judd, of Galesburg, Ill., is reported as saying, that "after twenty-two years' active practice, he had seen no spinal concussion cases recover until after the damages were recovered, and then speedily, except such cases as had no suspicion of a suit for damages attaching to them." To the credit of the Association, his ungenerous imputation of motives did not go by unchallenged, though others joined him in attributing to Mr. Erichsen's work the growth of a large amount of malingering and humbug. A few words on the subject may be not without interest, though it can by no means be exhausted in a paper such as this.

In pp. 743-763, vol. 1 of Erichsen's 8th edition, the subject is dealt with, and the most cursory reader will be struck with the vast preponderance of subjective over objective symptoms, so that it has been said that the suit for damages turns mainly upon the credibility of the plaintiff. Careful examination will show that objective symptoms of great value are also urged: loss of electrical irritability, paralysis, epilepsy, insanity even, and obscure neuroses which, though really diseases, may count as symptoms of the reality of the lesion, and can be shown to be distinctly pathological.

A short discussion of Shock in general will pave the way to a better understanding of the question. The symptoms of Collapse are too well known to need repetition at length: the pinched and changed expression, paleness and clammy sweat, sighing, irregular and shallow respiration, muscular relaxation; lustreless, half-open, unmoving eyes, with wide-open pupils and dark rings beneath them; blunted sensibility, both special and cutaneous, with no loss of rationality if only the sensorium be strongly enough appealed to; the small, slow, irregular, almost imperceptible pulse, and marked diminution of temperature; these are some of the chief. They indicate absolute loss of control, for a longer or shorter period, of the vascular system by the vaso-motor nerves, so that the patient is "bleeding into his own veins"; and by anæmia and nervous jar all the organs are rendered, for the time being, incapable of performing their functions. A workable theory

as to the causation of "railway spine" may be mentioned in this connection, that "the functional disturbance of the cord without demonstrable cord lesions, can be best accounted for by supposing that the spinal sympathetic system has been deranged, secondarily interfering with the blood supply of the cord and its membranes." This interference may or may not go on to cause chronic myelitis, or one or other form of sclerosis.

Shock in all its forms may be classified, as to causation, under the three heads: 1. *Corporeal* or traumatic, one variety of which is surgical shock, and which is usually either transient or speedily fatal. 2. *Psychic* or emotional, which may be instantly fatal, as in the classic tale of the execution of the janitor of King's College, Aberdeen, by the students, who with elaborate detail tried, sentenced and blindfolded him, then, instead of the axe which he had seen, struck him across the neck with a wet towel, causing instant death. Cases of death from sudden emotion will suggest themselves as within the experience of many of us. Another and not infrequent result of psychic shock is a condition of "chronic shock," often very persistent, but seen more frequently as the result of — 3. *Combined corporeal and psychic shock.* This variety is more frequently seen as the result of railway accidents than from any other cause, so much so, that it has been given the special name of "railway shock." All degrees of severity are seen: the mangling of the body which either causes speedy death, or, by the corporeal shock, blunts the nerves, so that the secondary shock due to the horrors of the scene can make no impression upon the obtunded sensorium. Or if the body escape with a scratch or a trivial bruise, the emotional element in the shock sustained is received in full force by the nervous system, the severity of the impression being usually in direct proportion to the absence of physical injury, and frequently ending in a condition which has been named "traumatic neurasthenia," the chief symptoms of which are, among various neuroses, emotionalism, flushing, hyperidrosis, tachycardia, sleeplessness, headache, epilepsy, even insanity.

The symptoms and sequelæ of this combined variety of shock vary according to—1, the region injured; 2, the emotional state of the patient both by temperament and at the time of the accident; and, 3, the age of the patient, a child usually suffering little from psychic shock. The force of the shock may be expended mainly on the heart and vascular system (traumatic shock), or the brain and cord (psychic shock and neurasthenia).

The position assumed then by such special pleaders for railways as Herbert Page, with his assertions about "litigation symptoms" and "quick-cure-by-settlement" cases, is that psychic shock cannot produce organic cord changes, and the public in this day of the *sauve-qui-peut* chase after the nimble dollar, in which might makes right as much as ever it did in the palmiest days of Feudalism, are surely indebted to Mr. Erichsen for putting on a recognized footing the disease we have been discussing, collating its symptoms and putting them as it were in concrete form. Grant that humbugs and malingerers have in some cases profited by his labors, just damages have doubtless in many more cases been awarded, for "we find many instances, in and out of the books, of fatal issues among patients accused of malingering. We occasionally find a conscientious railway surgeon who acknowledges that railway accidents do not always improve health, and that a few dollars' settlement will not resurrect the dead."

Cases of railway shock are usually such as demand entire absence of bias, "the scientific mind" for their true diagnosis, lying as they do in the dim borderland in which mind and matter meet, which neither the physiologist nor the psychologist will ever fully understand. And surely it is only serious bias which can deny that psychic shock can, apart from organic lesion, produce damage by which the nervous system is incapacitated from performing its functions, and the unfortunate patient caused such suffering as no mere physical maiming could produce.

THE KOCH TREATMENT.

The world generally and the medical profession in particular have, during the last few weeks, been excited by the marvellous discoveries of Dr. Koch. The treatment of tuberculous lesions of various kinds has been taken up by the ablest and most scientific men of the world, with the result that to-day we have before us sufficient data to outline the usefulness, and some of the dangers, of this wonderful agent. In the presence of the facts as stated by various observers, and modified in some

instances by the varying interest and enthusiasm which attaches to every new discovery, we can recognize in Dr. Koch's anti-tuberculine a remedy which, when injected even in the small dose of one milligramme, excites marked change, in all deposits of a tuberculous nature. That these changes are, in the very great majority of cases curative, it is not possible for even the most ardent advocate of the treatment to assert. In lupus it does cause a most wonderful series of changes, these being mainly of the character of "œdema" of the lupus patch—the scar tissue softens, and the part of the lupus patch not cicatrized becomes acutely inflamed and afterwards tends to heal. But lupus is probably the most insidious and unsatisfactory of all diseases to deal with, owing to its great tendency to relapse; and it has been found, even already, to have evinced this same tendency after the Koch treatment, and in subsequent relapses the injection has not been followed by results the same as at first.

That certain substances of a septic character will excite acute inflammation in a part previously inflamed, or will lead to changes in old scar tissue, has long been known to the profession, and a glycerine extract of tubercle bacilli is essentially a similar substance. When the reports of Koch's treatment of tuberculosis of the lungs, at present to hand from all parts of the world, are carefully reviewed, it is not possible to regard the treatment of pulmonary cases with much hope; a few cases have been reported cured, but such form a very small percentage of the total number treated. It has been proven beyond doubt, that in advanced cases where cavities exist, or in which there is any extensive involvement of the pleural covering, the injection is in the highest degree dangerous.

It is to be regretted that the lay press has given such great publicity to this matter; the harm done is everywhere apparent, not only in the number of those who, unsuited for treatment, have been led to travel long distances in the vain hope of being speedily cured; but in the incorrect and sensational reports it has given of the views held by many eminent members of the profession, it has led the public generally to believe that the medical profession everywhere regarded it as a permanently established cure for pulmonary phthisis, and the fact that such is not at all likely to be the case will rebound to the injury of the profession.

In addition, the manner in which those who have handled the lymph have been advertised and reported has been most injurious in its tendencies, and while some may have favored the publicity which the daily papers gave them, we are of the opinion that such are very few.

PALPATION OF THE NORMAL UTERINE APPENDAGES.

Dr. Howard A. Kelly read a paper upon the "Palpation of the Normal Uterine Appendages" (published in full in the Feb. number of the *Am. Jour. of Obst.*) He stated that the normal uterine appendages could always be palpated. There are two avenues of approach, by the vagina and by the rectum, and three ways of utilizing these avenues. First, with one hand; second, with two hands employed bi-manually, either by vagina or rectum, and third, the tri-manual method, by vagina and by rectum.

First, the examination with one hand is unsatisfactory and the ovary cannot even be felt, unless abnormally displaced downward into the recto-uterine pouch. Second, the success of the bi-manual examination depends upon the downward pressure with the external hand displacing the abdominal walls in the direction of the ovary to be palpated, and thus affording a resistant plane against which the ovary can be felt by the internal hand. The internal hand must be used to invaginate the perineum, which is thus displaced upward into the pelvis. This invagination gives the examining finger, even though it be a short one, the necessary length. One, often even two inches, are thus gained to the palpating finger. Care must be taken in making the pressure necessary to produce this invagination, not to stiffen all the muscles of the forearm, thus impairing the tactile sense.

The rectum is, of all others, the best avenue for approaching the structures lateral to the uterus, affording as it does a wide open channel throughout the whole length of the pelvis. Where the structures cannot be reached at once through the rectum, they are brought within easy touch by bringing the uterus and ovaries into an *artificial retroposed* anteflexion, the mechanism of which was carefully described, by diagrams.

Dr. Kelly had, in this way, palpated fibroid

tumors on the posterior surface of the uterus near the fundus, not as large as a pea.

Third, the tri-manual examination is conducted either by the vagina or by the rectum and vagina, assisted with the hand above. The peculiarity of this method is an *artificial descensus uteri*. The uterus is grasped with a pair of bullet forceps and drawn downward until the cervix is seen at the vaginal outlet, and while an assistant holds it in this position, the gynæcologist uses his hands bimanually. To obviate the employment of an assistant, Dr. Kelly has invented an instrument, which he calls the corrugated tenaculum, flattened and roughened so that it can be readily held between the last phalanges of the third and fourth fingers and the ball of the thumb, while the index finger of the same hand, assisted by the abdominal hand above, is engaged in making a vaginal or rectal examination.

By one or the other of these methods, the uterus, broad ligaments and ovaries and tubes are within reach of a most thorough and searching examination, revealing at once the smallest abnormalities.

SIMPLE REMEDY FOR PALPITATION.—Dr. Gingeot (*Rev. Gen. et de Chir. et de Ther.*) recommends (*Jour. Am. Med. Assoc.*) as a valuable remedy for palpitation—one that has proved serviceable to him—the application of cold to the precordial region. Attention must be paid to the method of applying cold. The simplest plan of all is to apply a wet sponge over the heart in the morning before dressing. At night, when in bed, the patient or an assistant may put a cold compress over the heart, well covered with dry bandages, to retain moisture, and prevent any wetting of the clothing. When this compress is warm, the patient will remove it, and will probably fall asleep. There are objections to the ice-bag, one being the condensation of insensible perspiration upon the surface of the skin. The ether-spray is a simple and convenient method of refrigeration. With proper instruction as to necessary precaution in the use of ether, the patient can apply cold in this way at any hour of the day or night. Palpitation of purely nervous origin seldom fails to be greatly benefited by the application of cold; and a certain success often follows its use in cases of palpitation due to organic diseases. Equalizing the heart's action will often prevent an increase in its size. It is also useful in aneurism and passive dilation.

TURPENTINE IN ENTERIC FEVER.—Prof. H. C. Wood (*Med. News*) fears that the value of turpentine in typhoid fever is in danger of being overlooked at the present day. There are two stages of the disease in which it is particularly useful. The first stage is at the end of the second week, when the tongue becomes dry and glazed and the abdomen very distinctly tympanitic, with or without diarrhœa. The second period is during convalescence, when perpetually recurring diarrhœa indicates failure of some of the ulcers to heal. Professor Wood states that it is his routine practice to give turpentine in every case of typhoid fever, beginning about the twelfth or fifteenth day; and he believes that if its use were habitual, there should be fewer cases of intestinal hæmorrhage or other severe symptoms due to local lesion. It may be given with glycerin and a volatile oil made into an emulsion, in doses of ten to fifteen drops every two hours during the day time, the patient being allowed to rest at night. The following formula is used by him:

R.—Ol. carophylli, ... gtt. vj.
Ol. terebinthinæ, ... ʒ jss.
Glycerinæ, ... ʒ ss.
Mucil. acaciæ, ... ʒ ss.
Syrupi, ... ʒ iij.
Aquæ, ... āā ad. ʒ iij.
M. Sig.—Desertspoonful as directed.

CHRYSAROBIN IN HÆMORRHOIDS.—A Paris correspondent of the *Pharm. Rec.* states (*Coll. and Clin. Rec.*) that extraordinary success has been reported with chrysarobin in the treatment of hæmorrhoids. For the external variety he prescribes the following ointment to be applied several times daily after a washing in a 1 to 50 solution of phenic acid, or a 1 to 100 solution of creolin: Chrysarobin, 80 ctgr.; vaselin, 25 gm.; for external use. For internal use the formula is as follows: Chrysarobin, 8 ctgr.; iodoform, 2 ctgr.; cacao butter, 2 gm.; make one suppository. In three or four days, pain and hæmorrhage are said to disappear, and it rarely happens that the most obstinate cases are not cured within two or three months.

TEA DRINKING AND COLD FEET.—Mr. Jonathan Hutchinson says in the *Arch. of Surg.*, that he once advised a lady to drink more tea. "I cannot touch it," was her reply. "It makes my feet icy cold, and wet with cold perspiration." On further inquiry, she assured Mr. Hutchinson that she was quite certain of her facts, and had often tested them. She thought that the perspiration was usually of the soles chiefly. Her hands were, she thought, also made cold, but not so definitely as her feet. Mr. Hutchinson says he had long been familiar with the facts that tea made the feet cold, but did not know that cold perspiration attended it.

SALOL IN ACUTE TONSILITIS AND PHARYNGITIS.—Dr. Jonathan Wright speaks highly of this drug in the above conditions, in doses of from 60 to 120 grains daily. It is given best in powder form, or as an emulsion. The author appends Dr. Gongenheim's summary:

(1) Salol acts beneficially in acute angina of whatever cause. (2) It quiets pain and dysphagia with the greatest rapidity. (3) It may shorten the duration of quinsy. (4) It lowers the temperature. (5) In nearly all cases it diminishes the duration of the angina. (6) Sixty grains at least should be given daily.

GRANULAR CONJUNCTIVITIS.—The following treatment is recommended by Tenlon (*Med. Progress*) in cases of granular conjunctivitis of a persistent type, with much photophobia. He orders one drop of the following collyrium to be instilled into the eye morning and night:

℞—Distilled water, ... ℥ ss.
Neutral sulphate of atropine, . . gr jss.

In the evening he introduces into the eye a very small piece of the following ointment:

℞—Calomel, pure and thoroughly pulv., ʒ ij.
Vaseline, ... ʒ j.

He also finds it of service during the day to apply fomentations for as long periods as possible, consisting of the decoction of chamomile as hot as can be borne. At the same time it is well to administer internally cod-liver oil, syrup of the iodide of iron, and general tonics.

TREATMENT OF SWEATING FEET.—Dr. Legoux says (*Internat. klin. Rundschau*) that liq. ferri sesquichlorati is the best drug for this condition, and he uses the following mixture:

℞—Liq. ferri sesquichlor., . . ʒ viiss.
Glycerini, ... ʒ iiss.
Ol. Bergamotti, ... ℥ v.—M.

Sig.—To be applied either with a camel's hair brush, or a feather, on the soles and between the toes. In a few days the sweating and the stench disappear.

THE DRY TREATMENT OF CHANCROIDS.—The following treatment in use in the surgical divisions of Bellevue Hospital, New York, is recommended: After the prepuce has been retracted a small quantity of absorbent cotton is made to surround the penis just behind the corona, and is held in place by a rubber thread-band. The sulcus behind the glans is thus obliterated, and no longer forms a receptacle for secretions. The ulcerated glans is free from irritation, the prepuce being held back, and the cotton absorbs the exudation almost as soon as formed. The dressing can be changed as often as is necessary to keep the parts dry.

INFANTILE CONSTIPATION WITH GASTRIC IRRITABILITY.—Dr. Woodbury, of Philadelphia, says, in *The Dietetic Gazette*, that this may be relieved by a quarter of a grain of calomel with two grains of saccharated pepsin every hour or two till the bowels are evacuated. For simple constipation, he recommends Carlsbad water in tablespoonful doses, four or five times a day. This has a most happy effect, partly from the quantity of water, but more especially from the increase of secretion along the intestinal tract, caused by the action of this water.

THE TREATMENT OF BURNS.—Dr. Bradeleben, of Berlin (*Lyon Med.*) treats burns by washing with a 2% solution of carbolic acid, or a 3-1000 solution of salicylic acid. The blisters are then opened and the whole surface covered with subnitrate of bismuth, over which cotton wool is placed in a thin layer. This dressing is removed when necessary; if the burns are very extensive bismuth in ointment is used instead of the powder. It is said that symptoms of bismuth intoxication never follow, and that recovery is more rapid, and suffering less than with any other method of treatment.

TREPHINING FOR EPILEPSY.—Says Dr. Minor *(Boston Med. and Surg. Jour.)*:—There are three main indications for trephining in epilepsy that hold good, provided medical treatment or the removal of peripheral irritation by other methods fails to cure or relieve.

1. In the distinctly traumatic epilepsies following depressed fractures and other lesions of the skull.

2. In the traumatic epilepsies in which the only visible lesion consists of a scalp wound that is sensitive or tender, and upon which pressure develops either an aura, vertigo, or an epileptic seizure.

3. In all epilepsies, whether traumatic or not, in which the character and development of the seizures is such as to indicate a definite motor area as the seat of a cortical lesion.

The contra-indications, he went on to say, were, in brief, those that might be applied to cases of such long duration as to lead to marked mental degradation; to cases in which from the first the seizures had been general and sudden; to cases where the general symptoms indicated an extensive cerebral degeneration, and to cases where, in addition to any or all of these conditions, there was nothing in the symptoms or history of the case to indicate a definite or circumscribed lesion of the cortex that could be reached or removed.

TREATMENT BY SUSPENSION.—Little seems now to be written or said, says *The Lancet*, regarding this method of treatment in this country. On the Continent, however, it is still used, but apparently its sphere is being gradually narrowed. In the *Deutsche Med. Wochenschrift*, 1890, No. 37, Rosenbaum gives the results observed in a series of cases seen at Mendel's clinic in Berlin. Of sixty cases which had a full course of treatment, there were twenty-five which improved. The improvement was most marked as regarded ability to stand and walk; the pains were lessened in frequency, but not abolished; incontinence of urine was temporarily improved in some cases, but it is not claimed to have been cured in any. As to improvement in the acuteness of vision in cases where the sight was affected, nothing very definite seems to have been experienced. It is to be noted that the cases in which improvement is said to have taken place are all cases of locomotor ataxy. The author is not enthusiastic as to the efficacy of suspension, but thinks it might be tried, and is of opinion that in estimating its value from the therapeutic point of view, allowance must be made for the very considerable mental effect produced on the patient.

IMPORTANCE OF EXAMINATION OF THE TEETH IN EPILEPSY.—Dr. Bakowski mentions in the *Przeglad Lekarski* (*Lancet*) an instructive case of epilepsy occuring in a young Jewess. It had been going on for nine months, and latterly the fits had become more frequent, there being several every day. Bromide of potassium, quinine, arsenic, and asafœtida had been given without any effect. Finally, although there was no complaint of toothache, it was decided to examine the mouth. Two teeth were found to be carious—the first upper molar on the right and the first lower molar on the left side. These were extracted, with the result that the fits entirely ceased and did not return, though the patient was under observation for six months subsequently. Upon being closely questioned the girl remembered that before the fits commenced she had had some unpleasant sensations in the affected teeth, but nothing that could be described as pain.

EHRLICH'S TEST FOR TYPHOID FEVER.—The difficulty of the early diagnosis of typhoid is recognized by every practising physician, and any aid in that direction should be very thankfully received. The following is said to be certain: Make two solutions, one consisting of seventy-two minims hydrochloric acid and ten grains of sulphanilic acid in three ounces distilled water; the other, a freshly-prepared one-half per cent. solution of sodic nitrite in distilled water. To twenty-six parts of urine from a typhoid fever patient, add twenty-five parts solution one, and one part of solution two, and the mixture is rendered alkaline by addition of ammonia. A bright orange-red color appears.

SAYS the *Hospital Gazette*:—We understand that Dr. Duke, of Dublin, has designed, or will shortly publish an illustration or description of a new form of chloroform inhaler, the advantage claimed being that the valves are made to sound on the slightest inspiration or expiration of the subject under chloroform, and so give immediate notice of any change in the respiration. When

we consider the large number of deaths from chloroform published week after week, any means for contributing to the safety of chloroform administration should be gladly welcomed.

The Hamilton Medical and Surgical Society held their seventh annual dinner in Newport's Dining Hall, on Thursday the 16th ult., at which all the members thoroughly enjoyed themselves. The toast list of the evening embraced:—The Queen and her Representatives, The Hamilton Medical and Surgical Society, Our President, Our Guests, The Ontario Medical Council, Our Absent Friends, The Army, Navy and Volunteers, and The Ladies.

Ether Injection for Neuralgia.—Dr. Kunes, of Antwerp, has conceived the plan of using subcutaneous injections of ether in the treatment of neuralgia. He prefers to use Hoffman's anodyne, containing equal parts of ether and alcohol. He injects as near the seat of pain as possible, a quantity equal to what an ordinary Paravaz syringe will hold. Often a single injection has sufficed, but in a certain number of instances, two or three have been found necessary.

Puerperal Fever.—At a recent meeting of the Obstetrical Society of London, in a discussion regarding fever in childbed, opened by Boxall, it was concluded that bi-chloride of mercury remained the best antiseptic known, but that its routine use in douches was not necessary. In several hospitals of London, salufer had been tried as an antiseptic, but found inferior to corrosive sublimate.

A Solution for Nasal Catarrh.—According to *L'Union Médicale*, the following solution is used successfully in the London Hospital:

℞—Ammon. muriatis, ... ℥ j.
Sodii chloratis, ... ℥ iiss.—M.

Sig.—Add a teaspoonful to a glass of water, to be used twice daily as a nasal douche in post-nasal catarrh combined with deafness.

Puncture and Collodion in Hydrocele.—Leroy recommends that one-third, or one-fourth of the fluid be withdrawn by means of an aspirator, after which the whole scrotum is painted with a thick layer of collodion, which is to be renewed every twenty-four hours. A cure results in from 12 to 15 days. M. Broquet has also employed this treatment with success in three cases.

Comedones.—McCaskey (*Weekly Med. Review*), uses the following application in the treatment of comedones:—

℞—Ether sulphuris, ... ℥ viij.
Ammon. carb., ... ℥ i.
Boric acid, ... gr. xx.
Aquæ. ad. . . . . ℥ ii.—M.

Sig.—Apply locally, twice daily.

Nitro-Glycerine in Asthma.—Dr. Hofman has recommended subcutaneous injections of nitroglycerine in doses of $\frac{1}{100}$ to $\frac{1}{50}$ of a grain. In angina pectoris and severe asthma he claims that the effects of these injections are remarkable. No objectionable after-effects have yet been observed.

Tannin in Burns.—Mikasky, in *Rev. de Therap.*, recommends tannin in superficial burns, as follows:

℞—Tannin,
Alcohol, ... āā ℥ j.
Etheris sulph., ... ℥ i.

We learn from Dr. Powell that Dr. Nicholas Seine has signified his intention to read a paper at the next meeting of the Ontario Medical Association. Dr. Howard Kelly, of Baltimore, will also be one of the American guests who will read a paper.

By an error in our December issue, the name of Dr. W. E. Almas was included in the list of those who recently took the triple diploma, Ed. Dr. Almas took the L.R.C.P. Lond. examination and holds that diploma.

Salol-Collodion.—Dissolve four parts of salol in four parts of ether, and then add thirty parts of collodion, and apply it to the affected parts in acute rheumatism and it will be found to give rapid relief from pain.

Dr. J. H. Parsons, late of Meaford, Ont., has returned from Europe, where he has been devoting himself to the special study of the eye, ear, throat, and nose. He will soon begin the practice o his specialty in the citv.

IT is said that one of the patients suffering from leprosy, treated by Prof. Neumann, of Vienna, shows some signs of improvement. There is said to be a flattening of the nodules and some desquamation.

SCABIES.—The London *Med. Rec.* says the following is an efficient application for scabies:

℞—Creolin, ... 1 part.
Balsam of Peru, ... 20 parts.

INK AND RUST STAINS are easily removed (*Med. World*), by a solution containing ten parts each of tartaric acid, alum and distilled water.

Books and Pamphlets.

COMPEND OF DISEASES OF CHILDREN, by Marcus P. Hatfield, M.A., M.D., Professor of Diseases of Children, Chicago Medical College; Physician to Wesley Hospital, etc.

Having read this compend, we are fully convinced that it will merit the approval of the medical student. As there are no lectures given solely on children's care and diseases, this little volume will be of great service to him, until he commences practice, when the use of a more lengthy discourse on this subject will be found necessary.

As the first few years of child-life are the most critical, and likewise most difficult to manage when disease sets in, the young physician should be well acquainted with the management and treatment of children, and as a preparatory course, while a student, Dr. Hatfield's compend will be sufficient.

COMPEND OF HUMAN ANATOMY, by Samuel O. L. Potter, M.A., M.D., Professor of Theory and Practice of Medicine in the Cooper Medical College, San Francisco. Author of "A Handbook of Materia Medica, Pharmacy and Therapeutics," etc. Late Ass't.-Surgeon U. S. Army.

Of all the studies in a medical course, anatomy is the most important. To wade through a "Gray," for review, is very irksome, and by having an Anatomy in an epitomized form and thoroughly reliable, both time and labor will be saved. Dr. Potter has thus conferred a boon on the student and practitioner alike, by publishing his compend of Anatomy. The tables and plates of the nerves and arteries are excellent; these constitute the Appendix, and by their aid one can review this important part of the work in a short space of time.

A PRACTICAL TREATISE ON IMPOTENCE, STERILITY and allied disorders of the Male Sexual Organs, by Samuel W. Gross, A.M., M.D., LL.D., Professor of Surgery and Clinical Surgery, Jefferson Medical College, Philadelphia, etc. Fourth edition, revised by F. R. Sturgies, M.D. Philadelphia: Lea Bros. & Co. 1890. Toronto: Vannevar & Co. Pp. 169, cloth.

The author lays great stress upon the fact that impotence and sterility depend upon reflex disturbances of the genito-spinal system, which are almost always induced or maintained by appreciable lesions of the prostatic urethra. He makes this very clear by the narration of a number of well selected cases. The work supplies, in a compact form, sufficient practical and strictly scientific information for the general practitioner. We commend the book as a very suggestive and useful one, and believe it will do much to enlighten the rank and file of the profession in those subjects; for while the uterus and ovaries with their various disorders are constantly kept before the minds of the profession, information relating to the male sexual system is much more difficult to find.

THE PHYSICIAN'S RECORD, for the use of Physicians and Nurses, compiled by Agnes S. Brennan. New York: G. P. Putnam's Sons. Toronto: Williamson & Co. 1890.

This will be a useful blank-book for nurses having charge of cases in private families. It is ruled for date, time, temperature, respiration, pulse, medicine, nourishment, stimulants, remarks and urine, with an interleaved slip for the doctor's orders,—at the end one charts for the physician. The book contains 100 pages, and is neatly and strongly bound.

Births, Marriages and Deaths.

At Christ Church, Willard, N. Y., on Jan. 7th, '91, Edwin R. Bishop, Esq., M.D., of the Willard State Hospital, to Miss Bessie E. Gilbert, daughter of Morris J. Gilbert, Esq., of Willard, N. Y.

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Original Communications.

A REVIEW OF THE TREATMENT OF FIBROIDS OF THE UTERUS.*

BY G. S. RENNIE, M.D., L. R. C. P. L., HAMILTON.

The treatment is best considered under the head of Medical, including Electricity, and Surgical.

Medical.—We have at present no remedy that will act upon fibroid tumors, so as to cause their disintregation and absorption.

Ergot of Rye, however, is a very important remedy in fibroids. It acts beneficially in two ways: 1st. It checks their nutritition by diminishing the amount of blood sent into them. 2nd. It favors their pedunculation and expulsion.

These two effects are due to the action of the drug on the unstriped muscular fibres of the walls of the uterus, and coats of the blood vessels. The best results are obtained from ergot, when the drug is administered hypodermically, and in suitable cases. By suitable cases, I mean those in which the tumor is intra-mural or submucous; it must be surrounded by layers of muscular fibre sufficiently developed to be capable of contraction.

Hydrastis Canadensis, given in doses from ℥ 15 up to ʒiv, will usually check the hæmorrhage, but it has no influence on the size of the tumor.

Bromide of Potassium and other remedies have been used with a varying amount of success.

Electricity.—The treatment of fibroids of the uterus by electricity, was about three years ago brought prominently before the profession by Dr. Apostoli, and it is still on trial; as yet we have not sufficient data to come to any conclusion, as to its real value.

If we take Apostoli's figures they are most pleasing: he says that in 278 cases he has treated, 95 times out of 100, permanent benefit has followed, with a suppression of all the miseries connected with such tumors. Now what are these miseries: hæmorrhages, troubles of menstruation, dysmenorrhœa, nervous disturbances, direct pains in the growth itself, and from mechanical pressure, and the annoying series of reflexes

Cutter records 50 cases, with the following results: 11 cured, 3 relieved, 25 arrested, 4 fatal and 7 without benefit.

Skene Keith mentions 13 cases in all, of which he says, the tumor was reduced and symptoms relieved.

Thos. Keith, 100 cases, in every one of which he says the tumor was reduced in size, hæmorrhage and pain checked, and general health improved.

These results are most pleasing, but against them can be cited numerous cases that have not been benefited in any way. Apostoli, Massay and others, say, that this method of treatment has met with failures because the gynæcologists do not know how to apply the treatment properly; but this, to my mind, is not a reasonable statement. After a discussion following a paper on this subject by Dr. Townsend, before the American Gynæcological Society, the conclusion arrived at was, that the results obtained by Apostoli and the Keiths had not been got by others who had used it in a large number of cases, nor could any better results be obtained by electricity than by rest, ergot, etc.

Dr. Halliday Croom, of Edinburgh, has arrived at the following conclusions:

1st. That electricity will arrest the hæmorrhage, but he has not seen a case in which the improvement was permanent, and he does not regard electricity in this respect as in any way superior to rest, ergot and styptics.

2nd. In regard to the pain, he says, that as far as fibroids are concerned, the pain is accentuated.

3rd.—With regard to the diminution in size of the tumor, he has not met with a single case which has shown any disposition to diminish through the influence of electricity, more than by any other means. While, on the contrary, he has found more significant cases of diminution from rest and ergot than from any electric treatment whatever. He is rather inclined to think that the electric current increased the development of muscular tissue, and his experience has been that

*Read before the Hamilton *Medical and Surgical Journal* Club.

some tumors had grown more rapidly after the use of electricity.

Dr. Stevenson, of St. Barts., holds about the same opinion as Mr. Croom, and many others in this country fall into line with them.

I have seen a number of cases treated by this method with little or no improvement. The electrical treatment of fibroids, brought forward by Apostoli, has not met with as great success in the hands of any one else, and from present statistics we might justly arrive at the following conclusions:

1st.—It cannot be doubted but that the hæmorrhage is less, or may be even controlled altogether for a time.

2nd.—That the tumors in a number of recorded cases have diminished greatly in size. But to say that the tumor has ever entirely disappeared in a single case, where the diagnosis of a uterine fibroid was beyond doubt, is a disputed point.

3rd.—That the applications of electricity to the uterus are far from void of pain, and patients object greatly to frequent applications on this account.

4th.—That local erosions may be produced when a current not exceeding 120 milliamperes is used; while Apostoli recommends a current as strong as 350 milliamperes.

5th.—That the employment of this measure is by no means unattended by danger to life, even when a current of much less strength than 250 to 350 milliamperes is used.

6th.—That puncture of the tumor and the employment of the galvanic current is far from being without danger, as a number of deaths from this procedure have been recorded.

7th.—That after all our labor, and pain to our patient, there is perhaps little more to be attained than we can get from the palliative treatment of rest, hot douching, ergot, etc.

Surgical Treatment.—This consists in the removal of the tumor through the vagina, or through the abdominal wall; or the removal of the uterine appendages with a view of checking the hæmorrhage and growth of the fibroid.

1. *Removal through the vagina.*—The cervix must first be dilated, then an incision is made in the mucous membrane covering the tumor. This checks the hæmorrhage, as it divides the venous sinuses in the capsule, which retract and are closed by thrombi. It also favors the expulsion of the tumor, which comes to protrude through the incised mucous membrane. After incision, the separation of tumor is generally left to the natural efforts, assisted by full doses of ergot. Should sloughing occur, the tumor must be rapidly removed, by a spoon-saw or other means. The mortality of this operation is from 15 to 20%.

2. *Removal through the abdominal wall by laparotomy.*—The operation here depends upon the nature of the growth. 1st. For subserous and pedunculated tumors, the pedicle can be treated intra-peritoneally as in ovarriotomy, *i. e.*, transfixed and ligatured in two portions, though it is desirable in addition to bring together with catgut the edges of the peritoneum over the end of the stump.

The statistics for this operation show a mortality of ten per cent.

In the second class of cases when the tumor grows from the serous aspect, but between the layers of the broad ligament, and into the cellular tissue, a more serious operation is demanded, viz., that of enucleation from the peritoneum and cellular tissue. The cavity, after the operation is sewn up with catgut, and the abdominal incision closed; or its margins may be stitched to the open abdominal wound, the hollow being packed with iodoform gauze. The mortality of this operation is very high.

The third class, when the fibroid is in the substance of the wall, gives occasion for two quite distinct methods of operation. (1) Enucleation from the wall; or (2) Hysterectomy.

1. Enucleation from the uterine wall, and sewing up the hollow, is an operation introduced by Martin, of Berlin. He describes the operation as follows:—"After the uterus has been exposed and drawn forward into the incision, a longitudinal incision is made over the tumor, which is shelled out of its capsule; the margins of the cavity are then trimmed with scissors, considerable portions of the muscular wall, and all the connective tissue portion of the capsule being sometimes excised, and the wound closed by continuous deep and superficial uniper catgut sutures."

The uterine cavity sometimes is opened during the operation, but if it be disinfected and packed with iodoform gauze, which acts as a drain, it does not affect the prognosis. The mortality from this method is 18 per cent.

2. *Hysterectomy, or Supra-Vaginal Amputation for Fibroids.*—This operation may be divided into three stages—1st, the opening into the abdominal cavity; 2nd, the extraction of the tumor; 3rd, the treatment of the stump.

1. An opening in the abdominal wall is made from the ensiform cartilage to the pubes. The bladder is sometimes high up, and may have to be separated from off the tumor; as the bladder is more easily defined when distended, it should not be emptied before the operation.

2. The tumor is brought out through the abdominal incision. When the mass is large it may be difficult to draw the slippery tumor out. To get more purchase on it a nickle-plated corkscrew may be inserted into the tumor.

3. After removal of the tumor the ligatured stump is either dropped into the peritoneal cavity and treated intra-peritoneally, as in ovariotomy, or the stump is brought to the abdominal incision, and being fixed there, is treated extra-peritoneally.

The great point in the operation is to successfully secure the ovarian and uterine arteries, in order to prevent hæmorrhage. The question then arises, how can we best secure these arteries, and how should the stump be treated after removal of the tumor?

Schoeder and Martin advise that a double silk ligature be carried on a needle from behind, through the cervix, so as to come out at the bottom of the vesico-uterine pouch in front; this is divided, and the end of each half carried backwards through the broad ligaments of its respective side, just external to the cervix, and knotted to its corresponding end; the cervix is thus tied in two portions, and each uterine artery is controlled by a ligature. The tumor, with the body of the uterus, is now cut rapidly away, with a large knife, above the ligatures. The uterine stump is cut in a V shape, and first the muscular walls are adapted by coarser, then the peritoneal covering with finer sutures. Martin, at present, I believe, employs an elastic ligature to constrict the uterus before suturing the stump.

I had the pleasure of seeing Mr. Sutton, at Middlesex Hospital, perform this operation a couple of times. The method he adopted was to pass a ligature by means of a long curved needle as deeply as was possible, on either side of the cervix, which, when tied, controlled most effectually, both the ovarian and uterine arteries. He then passed the wire of a *serre-nœud* around the neck of the tumor, which, when tightened, served as a safeguard against hæmorrhage. The uterus and tumor were then rapidly removed by a V-shaped incision, the wire of the *serre-nœud* loosened and removed with only a little oozing from the cut surface. The muscular walls were then carefully brought together with coarse, and the peritoneal covering with fine sutures.

While in London, I saw Dr. Bantock, at the Samaritan Hospital, remove a large fibroid with the uterus. He treats the pedicle extra-peritoneally and uses a *serre-nœud* to control the hæmorrhage. He does not apply any styptic or cautery to the pedicle when fixed in the abdominal wound, but dresses it with dry thymol gauze.

Dr. R. T. Smith did two hysterectomies while I was at the Hospital for Women, in Soho Square, both with success. He treated the pedicle in both of these cases extra-peritoneally.

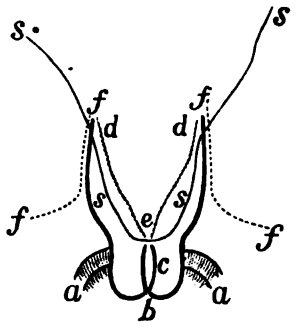
Sir Spencer Wells and Péan, both favor the extra-peritoneal treatment of the pedicle. Péan describes the operation as follows: The tumor is drawn out of the abdomen and held perpendicularly by an assistant. The operator transfixes the cervix with two strong wires at right angles to each other; below these wires he passes a curved needle through the cervix and drags back a double wire; this wire is divided and each half is fitted into a *serre-nœud* by means of which it is both tightened and twisted. The tumour and uterus are amputated above the wires; the pedicle is placed in the abdominal wound and is kept from retracting into the abdomen, by means of the wires and *serre-nœuds*; these are left in position, so that they may be tightened in case of hæmorrhage."

Keith prefers the application of a clamp to the *serre-nœud*.

Klieberg introduced the elastic ligature, which is passed double through the cervix, it is then cut and the two ends on each side firmly knotted.

Fritsch has had remarkable results without the employment of clamp, *serre-nœud* or elastic ligature. He uses stitches as in the intra-peritoneal method, the hæmorrhage being controlled by the employment of a temporary elastic ligature, until his stitches are placed in position. He proceeds as

follows: "After the tumor has been brought out through the incision, the upper portion of the incision is closed. The broad ligaments are secured in two places and divided between the ligatures and the elastic ligature applied. After the tumor is cut away the end of the stump is stitched as shown in the drawing (Fig. 1). The elastic ligature is then removed; and new stitches put in if there is bleeding, the uterine arteries being tied separately when visible. The broad ligament pedicles are drawn up and stitched to the side of the stump around which the parietal peritoneum is adapted. The sutures to close the abdominal wound are then passed, those next the uterine stump being passed through it." Fritsch has operated in this way on 19 cases, without a death.



(*a*) Vaginal wall. (*b*) External os. (*c*) Cervical canal. (*d.e.d.*) Funnel shaped raw surface left after excising mucous membrane. (*r*) Peritoneum. (*s*) Suture.

At a recent meeting of the American Association of Obstretricians and Gynæcologists, Dr. Werder read an interesting paper on the elastic ligature in the extra-peritoneal treatment of the pedicle. In speaking of its advantages, he says that the elastic ligature gives absolute security against hæmorrhage, and with it there is less danger from sepsis, because the dressings do not require to be disturbed for the first few days; nothing, therefore, prevents the formation of firm adhesions between the approximated peritoneal surfaces within the shortest space of time, thus securely excluding all septic matter from the peritoneal cavity that may subsequently form about the pedicle.

In the discussion that followed, Dr. Krug, of New York, said that he had given up the employment of the elastic ligature and extra-peritoneal treatment of the pedicle. He believes in not leaving any stump, and takes out all the uterine tissue and drains by the vagina. He has had remarkable success by this method, having operated in several cases without a death.

It is very difficult, or almost impossible, to get statistics of cases of abdominal hysterectomy, as writers give them along with their results of operations for the removal of fibroids tumors, not specifying the respective operations.

Thos. Keith reports 26 cases with four deaths. Tait, 88 cases, with a mortality of 11.3%, the last 31 being without a death. Joseph Price, 26 cases, without a death. In all, I have been able to collect 94 cases with 15 deaths. In 57 of these the stump was treated extra-peritoneally, with seven deaths; 22 intra-peritoneally, with four deaths, and in the remaining 13 it was not specified whether the treatment was intra, or extra-peritoneal.

There can be little doubt but that the safer way of treating the pedicle, from our present knowledge, is by the extra-peritoneal method, either by fixing it with *serre-nœud*, clamp, elastic ligature, stitches, or Tait's pins. Tait and Bantock both remark that certain cases of pedunculated fibroids might be treated by ligature and dropping the pedicle; but some pedicles would be insecure and dangerous, no matter how carefully they were tied, and even the most tempting pedicles cannot be relied on, for after they have been tied ever so tight they may begin to bleed within 24 hours.

On the Continent better results have been obtained from the intra-peritoneal treatment of the pedicle.

Sir Spencer Wells, in speaking of hysterectomies and the best means of treating the stump, says:—"I cannot help thinking that, as in ovariotomy, the clamp at one time gave better results than the ligature, but gave way to intra-peritoneal methods, so it will be with hysterectomy. But this is a matter for further observation, and improvements in the mode of applying the ligatures will, no doubt, be suggested."

(*To be continued.*)

The *Therapeutic Gazette* says that one part of menthol, twenty parts of alchohol, and thirty parts of simple syrup relieve nausea and vomiting—sometimes even the obstinate vomiting of pregnancy—if given in teaspoonful doses every hour.

INFLUENZA, ITS COMPLICATIONS AND SEQUELÆ.*

BY W. H, MOOREHOUSE, M.B. L.R.C.S., AND L.R.C.P., EDIN., LONDON, ONT.

My object in bringing this subject up for discussion, is, to get the views of the various members, (1) as to the mode of propagation; (2) its various forms; (3) its complications and after effects.

1. As to the mode of propagation, I think the history of the affection, its mode of onset, attacking different individuals in different ways, the rapidity of its dissemination, the wide area over which it extends, all induce me to believe that it must be due to some specific atmospheric influence, probably some form of living miasm.

Now, one of the main starting points of miasmatic epidemics is a good breeding ground, and such a breeding ground is said to be particularly well supplied by inundations, floods, etc., such as the overflowing of its banks by some great river; and it has been asserted, that the late epidemic was due to the great floods in China, about a year ago, when millions of animal lives were destroyed. These bodies, along with decaying vegetable matter, mixed with the slimy detritus and moisture, consequent upon such catastrophies, would make a capital breeding ground for such a nuisance.

The theory of the origin of the late epidemic in China, is well borne out, when we consider that it came from the east, working its way towards the west and south—through Russia, Germany, France, Great Britain, America and Australia, completely girdling the globe, in the space of a few months.

The first authentic account given of this disease was in the year 827, when we are told, "that even the dogs and birds suffered with it, as well as man." About the year 1658, this disease began to be known as influenza, which is derived from the Italian for "influence." Willis writes: "About the end of April, 1658, suddenly a distemper arose, as if sent by some blast of the stars, which laid hold on very many together, that, in some towns in the space of a week, above a thousand people fell sick together."

During the past three hundred years we have had a great many visitations of influenza; some writers say that we have had as high as one hundred and fifty such epidemics.

Etiology.—As I have stated, the disease is, no doubt, due to some form of living miasm, which is rapidly diffused from point to point through the atmosphere, effecting its entrance into the body through the respiratory passages, more particularly the air cells. At the same time authentic cases are on record, where the presence of the disease was due to personal intercourse and contact with those already suffering from it. Bodies of persons who died from influenza, when removed from one hemisphere to another, upon exposure, have been known to give rise to a local outbreak of this disease.

It may appear at all seasons of the year, and in all climates. It attacks both the weak and the robust alike, but the mortality is greater among the weak and delicate, as in also those having bad sanitary surroundings.

Clinical History.—This disease presents great variations in intensity, from being very mild and trifling to that of the gravest character, terminating in death. The milder forms come on with a feeling of malaise, lassitude, weariness, inability to concentrate the mind upon business matters; weakness, with shortness of breath upon exertion. To this may be added, some catarrhal trouble, such as laryngitis, bronchitis, coryza. Such cases may or may not be ill enough to keep their rooms.

Other more severe forms may be ushered in with a slight chill, or chilliness, alternating with flashes of heat; afterwards a fever of more or less severity comes on, ranging from 99.5° to 105°. One peculiarity in some of these cases is, the very rapid rise and decline of the fever, followed by very annoying sweats. At the same there may be intense frontal headache, with pain in the orbits and root of the nose, so that movement of the eyeballs causes distress; sometimes the pain is limited to one side of the temple or brow, or it may be bilateral. There is usually a dry cough, with slight soreness of the throat. The cough is apt to be paroxysmal, very irritating and annoying to the patient. Loss of the sense of taste and smell is of quite common occurrence.

We will now consider some of the leading features of this affection.

* Read before the Ont. Medical Association, June, 1890.

1. *Fever.*—As before observed, is irregular in character, and may vary from 99° F. to 105° F. It frequently rises and falls very rapidly. One hour the patient may appear cool and comfortable, and at the next hour be in a raging fever. It does not in most cases follow the law of "morning remission and evening exacerbation," the fever frequently being higher in the morning than in the evening. There may be a number of these periods of exacerbations and remissions in the course of twenty-four hours, each period being followed by a more or less profuse perspiration.

2. *Pain*, is one of the characteristic symptoms of a large class of cases, and is sometimes very severe, especially in the head, and muscles of the neck and back, also in the sides, limbs and abdominal muscles; in fact, any part of the body is liable to be affected. The pain is apt to be spasmodic, and, like the fever, remittent in character; a paroxysm of pain usually precedes the attack of feverishness.

3. *Disturbances of the Digestive Tract.*—Loss of appetite is a very constant symptom, with thirst, foul and loaded tongue, tenderness in the epigastric region, with nausea and vomiting; constipation may prevail. In other cases the catarrhal symptoms appear to attack the gastro-intestinal tract instead of the pulmonary, producing diarrhœa, and even dysentery; as a result we have chronic gastro-hepatic catarrh.

4. *Urine* is sometimes very much decreased in volume, one case noted, after a prolonged attack of influenza, passing only two oz. in 24 hours; this continued for nearly three weeks. In three cases there was a marked hæmaturia; urates are usually abundant.

In from three to twelve days the fever begins to abate and the pains subside, there is then an increase in the flow of urine, expectoration becomes more free and the catarrhal symptoms abate, but may become very protracted.

5. *Nervous System.*—There is often very marked functional disturbances of the nervous system, with great depression and lowness of spirits and loss of strength; mind may become weak, and even delirious, which may last for some time; stupor, convulsions, cutaneous hyperæsthesia, with areas of burning pain, similar to the application of a sinapism, or some highly heated surface; neuralgia, myalgia, pleurodynia, muscular twitchings, etc., Often there is a great drowsiness, or the reverse may be the case.

The above, are some of the symptoms met with in ordinary practice, during an epidemic of influenza. Seldom are they all met in the same patient, but there are certain types which appear to prevail. For example, there is:

(1) *Catarrhal fever* which may be further subdivided into (*a*) respiratory, (*b*) gastro-intestinal.

It is generally supposed, that all cases of influenza partake more or less of the catarrhal form, and from an analysis of a number of cases I find that it prevailed in ¾ of all cases affected; yet, contrary to the general opinion, it is not an essential feature of the disease.

(*a*) In that form attacking the respiratory passages, there is more or less extensive hyperæmia of the mucous membranes of the head and throat, extending into the bronchial tubes; cough is more or less severe, and often spasmodic, out of all proportion to the amount of bronchitis and expectoration, which has lead to the idea that it is often of nervous origin, or it may be due to some enlargement of the bronchial glands.

(*b*) In the gastro-enteric form, we have a hyperæmic condition of the mucous membrane of the stomach, liver, gall bladder and ducts, together with the intestinal tract. This gives rise, often, to great loss of appetite, nausea and vomiting, with diarrhœa, alternating with constipation. This inflamed and swollen condition of mucous membrane extends up the ductus communis choledochus into the gall-bladder and hepatic ducts. Jaundice, resulting from obstruction, is thus set up, with its attendant troubles.

(2) *Nervous Form*: One of the first and most prominent features of this form, is the extreme physical prostration. The slightest exertion, causing great exhaustion, with shortness of breath, and rapid action of the heart. This condition may remain for many weeks or months, long after convalescence.

Headache, which may come on remarkably sudden, is almost constant. The pains may extend from the root of the nose, through the orbits up into the brow, following the prolongations of the Schneiderian mucous membrane, into the frontal sinuses; often the pain is referred to the middle ear, which frequently suppurates. In other cases, the pain is seated at the point of attachment of

the cervical muscles into the occiput, at the base of the skull. Pain, of a severe character, may be felt in any muscle, or set of muscles, which may wander from part to part, in some cases attacking the heart, producing death, which I have seen in three instances.

Delirium, more or less mild, often attended with delusions, extending over weeks, may occur. A prominent feature of this form, is the great mental despondency which is often met; the patient is low-spirited and depressed, and takes no interest in his former hobbies. In fact, life appears a blank to him. The countenance denotes very great anxiety and is usually pale. Another feature, is that of muscular spasms or twitchings. I have a patient, who contracted influenza about six months ago, who is now, barely able to walk at times, on account of the twitchings, or "jerkings," as he calls it; sometimes, as in this case, a single muscle in a limb will twitch; again, a combination of muscles will take on spasmodic action, causing the limb to be rapidly drawn to one side. Tremulousness, with dizziness and faintness upon any sudden exertion, is frequently met.

Rheumatism, of a more or less acute character, of the joints is common, as also muscular rheumatism. Many cases, during the course, but especially towards the close, of an attack, appear to be complicated with a form of remittent, there being slight chills, followed by fever, which rises suddenly, and falls as suddenly, at irregular intervals, accompanied by night sweats, more or less profuse.

Cause of the various forms of this disease, is, no doubt, due to individual peculiarities, conditions of health, age, etc., and not to any variation in the character of the poison introduced into the system, as we find all the forms prevailing at the same time during the one epidemic.

Complications: (1) Capillary bronchitis; (2) Inflammatory conditions of the lung substance proper. We are told, upon good authority, that from 5 to 10% of all influenza patients suffer inflammatory lung complications.

Inflammation of the lungs was unusually fatal in my practice, during the past winter, when it occurred as a complication, or followed an attack of influenza. Catarrhal pneumonia was the form most usually encountered, and it appeared to be a gradual and insidious extension from the tubes to the air-cells. But the most fatal and distressing form was pleuro-pneumonia, coming on with violent and distressing pain at the very onset, the patient appearing to be stricken with death from the beginning, as though from collapse.

Pharyngitis has, in numerous cases, during the late epidemic, been very troublesome, often extending up the Eustachian tube to the middle ear, resulting in inflammation with great distress.

Inflammation of the kidneys, of a wellular character, was set up, during the second week of the attack, in a few cases.

Sequelæ: the most frequent is neuralgia; next, is myalgia, or muscular rheumatism. Eight years ago last March, a gentleman, forty years of age, had a severe attack of influenza, which left as a sequel, supraorbital neuralgia, and myalgia of the muscles, of the neck and scalp. He does not suffer constantly from these attacks, but they are apt to come on when very much fatigued. It makes its appearance by a painful sensation in the cervical muscles, gradually becoming more severe, and working its way up to the scalp, which becomes tender and painful, until the close of the second or third day, when all the pain appears concentrated over the left supra-orbital region, where it remains for 24 hours, when it takes its departure by a process of explosion. The entire process lasts from three to five days, during which there is extreme mental depression. He is then free for another week or two, until some exciting cause brings on another attack.

Old neuralgic affections, which have long lain dormant, have been revived with more than ordinary severity. The same may be said of rheumatism of the sub-acute type, which may be revived in old subjects, or started afresh, attacking the various joints, such as the wrists, ankles, etc., or the various muscles, in the form of lumbago, pleurodynia, etc., emphysema and organic heart-troubles have been much aggravated from the strain of coughing while in a weak, exhausted state.

Chronic Gastritis and Enteritis with congestion of the liver, which often takes months of dieting and careful treatment to overcome. These cases are liable to become aggravated by exposure to cold, or, when dormant, may again be aroused.

Great general debility, with nervous prostration and melancholia, is another very frequent

sequel, and is apt to make the patient a ready prey for any acute disease which may seize him. Several cases of great mental depression have come under my notice, approaching to a mild form of insanity. Such cases may last many months, and ultimately recover, provided some inter-current affection, as I have said, does not set in and carry them off.

Relapses are very common, many patients contracting the disease again and again, after apparent convalescence, thus keeping them in a low, weakened condition, which, in time, arouses into active existence any dormant diathesis, such as tuberculosis, etc.

THE TREATMENT OF DISEASES OF THE RESPIRATORY ORGANS BY INHALATION, WITH NOTES OF THREE CASES.

BY D. A. DOBIE, M.D., TOPONTO.

Since the introduction of Koch's method for the treatment of tuberculosis, and the very promising results reported, in many cases, we may be inclined to let our attention wander from the consideration of older forms of treatment.

By strict attention to hygienic conditions, nourishing diet, etc., we all have observed the benefits that the patient receives.

Halter, Krull, Weigert, and later, Jacobi, experimented with a method of treatment by inhalation of hot air, which would seem at first sight to have claims to be called curative, since its intention was to remove the cause of the disease, by destroying the bacilli.

Latterly, the use of beechwood creosote has given promise of good results. The ardent disciples of this method of treatment, have urged the saturation of the system with the drug; but the irritating effects upon the stomach, its nauseous and pungent taste, and the difficulty of combining it with other drugs, are objections to its internal administration.

These objections and its unquestionably good effects, where it could be well borne, together with the knowledge of the benefits afforded to patients suffering from pulmonary disease, by a residence in places where the atmosphere is impregnated with resinous emanations from pine forests, led me to try combinations of creosote, oil of Southern Pine needles, and other balsamic preparations, by inhalation, upon three patients suffering from pulmonary tuberculosis, the notes of which are given below.

The treatment by inhalation has long been practiced; but the instruments devised for that purpose, have heretofore been so imperfect, and inefficient, being merely spray producers or atomizers, that the results have been somewhat unsatisfactory.

The primary essential in an instrument for this purpose is its power to completely volatilize drugs intended for inhalation, thus ensuring their reaching the farthest recesses of the respiratory tract. I succeeded in securing a lately devised instrument, known as Dr. Coulter's Combined Vaporizer and Inhaler, which meets this requirement in the highest degree satisfactorily, and commenced using it with case No. I, on Oct. 24th, 1890.

CASE I. W. J. C., age 40, plainer; first seen Oct. 21, 1890. There was consolidation of the upper part of the left lung, extending in front to the lower border of the third rib and behind somewhat lower. There was considerable cough and expectoration, and from Sept. 1st, 1889, thirteen months previously he had had 28 attacks of hæmoptysis. He had been taking for one year previously cod liver oil and creosote, using ergot, turpentine and tannic acid for the hæmoptysis. The creosote had caused considerable gastric disturbance, and the turpentine renal congestion. Began using Coulter's vaporizer and inhaler on Oct. 24th, inhaling twice daily about 15 drops each of ol. pini. sylvestris, tr. iodi., and tr. benzoin co., and twice daily an inhalation of creosote and turpentine āā gtt. xx.

The atmosphere of the room was kept impregnated with these preparations.

The hæmoptysis ceased entirely, the expectoration was lessened, the temperature lowered, perspiration suppressed, the appetite improved, and his weight increased.

He quit using the vaporizer, feeling he needed it no longer, about Jan. 15, 1891.

There is now very little cough or expectoration, although very little apparent change in the physical signs.

CASE II. Mrs. D., first seen in May, 1890. The physical signs did not definitely establish a

diagnosis; but the cough was severe, with copious expectoration. On examination of the sputum, bacilli were found.

First general tonic treatment with ol. morrhuæ and creosote was given, with inhalations over hot water.

Afterwards a Coulter's vaporizer was procured, and the improvement has been gradual and marked. There has been no cough or expectoration since October last. The appetite has improved, night sweats have ceased, and she has gained in weight from 96 lbs. to 108 lbs.

Case III. W. J., aged 21 years. First seen November 1st, suffering from a rapid form of pulmonary tuberculosis. The left side and upper part of right side were flat and perfectly motionless, the lower part of right lung only expanding.

Without any expectation of improvement in so hopeless a case, but merely to satisfy the whim of the patient, I loaned him a vaporizer. Although he was not aware of the condition of his lungs, he called my attention to the fact that he only felt the inhalation in that portion of the lung expanding. This last case serves to illustrate the fact that the volatalized oil was carried to the farthest part of the lung.

In cases I and II there was undoubtedly a marked influence upon the cough, and a general improvement.

Although my experience has been limited, I considered these cases worth reporting, in the hope of hearing further of this valuable form of medication.

Selected Articles.

THE TREATMENT OF BRONCHITIS.

We make no apology for bringing the subject of acute bronchitis under the notice of those of our readers who may be in general practice, beyond the fact that the present foggy weather with low temperature and north-east winds will swell the number of cases under treatment, and we venture to hope that when our remarks have been read our busy brethren will have derived some useful "tips" in treatment.

To do our work thoroughly we will dip a little into the pathology of the disease and see what an important bearing a knowledge of it must have in directing our efforts. And first let us look at the anatomical structure of the parts concerned in an attack of ordinary catarrhal bronchitis in which we find the larger and medium sized bronchi, and by which we shall see the strong analogy that must exist between similar affections of the naso-pharynx and trachea, and which we will define as an inflammation of the mucous lining of the tubes, a prolongation of that lining the above-named organs. But as we get deeper into the chest, and still following a tube to its final ending, we find (1) that the cartilaginous plates become more irregular, smaller, and finally disappear; (2) the bronchial glands also disappear in the finer tubes; and (3) the mucous membrane becomes more intimately blended with the elastic and muscular coats, and also that it gets thinner the nearer we get to the bronchial terminals, forming, in fact, part of the alveoli of the lung proper, and from these we learn two very important lessons—first, to direct our endeavors to confining the disease to the longer tubes, and, secondly, that when acute bronchitis reaches the finer structures it must become a most potent factor in setting up broncho-pneumonia. We have also chosen the subject of acute bronchitis as the subject of our remarks because for some years we practised in a district not far from the river, and where we may say the disease was endemic, and thus we had opportunities of watching cases in all stages.

As we are strong believers in the teaching of pathology, let us see what changes take place in the course of an acute attack with regard to anatomical structures. (1) A bronchus consists of a mucous membrane, covered with cylindrical and ciliated epithelium, lying on (2) a basement membrane separated by connective tissue in which the network of capillaries ramify from (3) the mucosa proper, which is composed of elastic tissue surrounded by muscular fibres, and outside this is (4) the sub-mucosa or adventitia which is really the connective tissue proper of the lung, and in which the cartilaginous plates are embedded containing the pulmonary lymphatics. And now for the pathological changes which take place:—(1) Congestion and hyperæmia of the vessels of the mucosa; (2) œdema of the basement membrane; (3) shedding of the superficial epithelial layer with rapid reproduction; (4) infiltration of the adventitia with round cells of inflammation, which are thus transfused by the lymphatics to all parts of the bronchial tissues, and thus the inflammation is generally distributed over both organs. It is thus easy to see how quickly a case of capillary bronchitis may become one of double broncho pneumonia.

Now for treatment. Let us take a typical case. A young man, say from twenty to twenty-five years of age, comes under our notice with a feverish cold, his temperature reaches 101°F. to

103°F., with dry chest notes; we order him straight to bed in a temperature of 65° to 70°F., covered with blankets, and straightway inject ¼ grain of nitrate of pilocarpine subcutaneously, encouraging the subsequent sweating with diaphoretics and warm drinks, to be mentioned later on; the mixture we prescribe is liq. ammoniæ acet. ℥j., sp. eth. nit. ℥ss., sweetened camphor water ℥j., and with each dose two minims of Fleming's tincture of aconite, to be taken every hour for the first three or four doses, subsequently every two hours, finishing up next day with two grain doses of quiniæ sulph. By this means, in the majority of cases, we avoid having to pay many visits and save his club many weeks of sick pay. In this case we do not reach the second or moist stage of the disease, the first being what we describe as the hot, dry stage. But we do not always get at our cases in such an early stage, usually the first has passed off and the second stage is commencing. We still inject the pilocarpine and order the above mixture. but supplement the treatment now with steam from the bronchitis kettle, to which we add twenty minims of the ol. menthæ pip. for each pint of water in the kettle. This steaming should be continued for twenty or thirty minutes every two hours, or perhaps continuously for the first six hours, should the case be severe. With children in the same condition we use bicarbonate of soda in the proportion of ℥iv. to the kettle of water, poultices of linseed to the back and chest and a mixture proportionate to age, and for our little sufferers we manage to make a very nice bell tent with the mother's umbrella. When the acute symptoms have passed off we rub the chest and back with a liniment composed of ol. camph. (essential) ℥j., tinct. opii. ℥iss., lin saponis ℥iss., to be well rubbed in with the hand two or three times a day. Now the rationale of this treatment consists in causing the removal of carbon from the blood by the skin instead of the lungs, by inducing sweating, and it is wonderful how such minute doses of the tincture of aconite helps us to accomplish this. With children we also have the back and chest well swathed in wadding after the poulticing, but for adults this is not necessary. For these we are also convinced that no inhalant gives such a soothing affect as the oil of peppermint, but children do not bear it at all well. With adults also we find that if a stimulant is required we cannot find anything better than one-sixteenth of a grain of the hydrochlorate of cocaine in a pill freshly prepared, repeated in two hours if necessary. In *no stage of the disease do we consider alcohol necessary, in fact we look upon it as harmful.* After the temperature has come down to nearly normal we reduce the temperature of our patient's room to 60°F., gradually getting it to 55°F., and there we endeavour to keep it as long as necessary. The tonic we have found most benefit from is quinine with, in some cases, three minim doses of Fowler's solution. In poulticing children we have found it of benefit to cover the poultices with a piece of "Christia," a substitute for oiled silk of which we cannot speak too highly.

For drinks to promote perspiration we have found whey made after recipes published by Dr. J. J. Ridge, in a little book which he calls, "Diet for the Sick," and which can be procured from Messrs. Churchill, and for children "Cream Whey" will be found most useful. Saline aperients, should anything of the sort be needed, are indicated, and for children nothing is better than phosphate of soda, which may be given dissolved in beef tea. To sum up the points in treatment we lay most stress upon are the subcutaneous injection of pilocarpine *when* the patient is comfortably recumbent in a temperature of 65° to 70°F.; the exhibition hourly of tinct. aconite (Fleming's) until temperature is lowered; the keeping up of sweating until the breathing is easier, and the exhibition of hydrochlorate of cocaine if a stimulant is required.

Formerly the family doctor precribed almost invariably tartrate of antimony in acute pulmonary inflammation, and other remedies which would horrify the modern medico, and yet we almost think that even though we had not heard of the bacterium termo or the other strange animals which Professor Koch and his merry men are annihilating in billions (by their own account), disease was as quickly and satisfactorily dealt with as in these times, when the march of intellect demands the placing of the "Gamp" on a level with the heads of the profession; and there are many good men and true, who have the best interests of the profession at heart, who would strongly advise a return to the days when materia medica was learned while pounding up two or three pounds of pil. rhei. co., or mixing up the stock of mist. alb. This, however, has nothing to do with curing bronchitis, so to return to the subject and by way of concluding we would call attention to an old-fashioned remedy which is useful in most chest cases, and that is *Lichen Icelandicus*, otherwise Iceland Moss, prepared with milk as recommended by Dr. Ridge, or made into a jelly known in Ireland as "Carrageon Jelly." We hope that we have not wearied our readers and at the same time that we have given some useful hints on treating acute bronchitis. At some future time we may say something about the chronic form which so often remains as a sequel of the acute, and which is so difficult to treat satisfactorily.—*Hosp. Gaz.*

Headache almost always yields to the simultaneous application of hot water to the feet and back of the neck.

THE TREATMENT OF FAILING CIRCULATION, WITH SPECIAL REFERENCE TO THE USE OF STRYCHNINE.

When a physician is confronted by a case in which there is either sudden, gradual, or threatened failure of the circulation, the pregnant question arises—What is he to do? Naturally, his first thought is of some drug which, either from his own experience or that of others, he knows has been successful in combating or postponing this formidable complication, and the remedy he most desires is one that will act promptly and, as nearly as possible, entirely upon the circulatory apparatus. His judgment in the selection will be guided, if he be not merely an empirical therapeutist, by the cause of the cardiac weakness, the disease and condition of the patient, and the physiological action of the drug. It may seem unnecessary to make this preliminary statement, or even to broach the subject at all, to those whose high positions as teachers of medicine give them unlimited opportunities for experience and observation, and may even seem truistic in view of the fact that most of the matter here discussed can be found in so many text-books. But when it is considered that the average practitioner is prompted to request a consultation when this symptom begins to show itself, and that, as a matter of fact, comparatively few are able to cope with it, the writer may be pardoned if he omits an apology. He submits this paper with some diffidence, to invite a discussion upon this important subject, and in the hope that it will suggest to the minds of those who are familiar with the treatment of so-called heart-failure the usefulness of a publication of their knowledge of it.

There are numerous instances of the heart ceasing its function when it cannot be said that life would have flown under proper treatment, and it is in these cases that there is shown either the lack of proper remedies or the absence of a sufficient amount of medical skill, if not negligence. As previously stated, the remedy should act upon the circulatory system, and in a way that will increase the strength of the cardiac contraction and promote the rapidity of the circulation; and upon other parts of the organism it should not have any, or, at least, only a minimum, antagonistic concomitant action, which would tend to annul or counterbalance the prime effect upon the heart.

A glance at the physiological action of the cardiac tonics will show that some of them have a very disagreeable behavior in this respect, and in none is it so well marked as in the case of digitalis, which is generally adopted as an efficient agent. Quoting the words of an eminent writer, digitalis "prolongs the diastole and increases the vigor of the systole," an effect most desirable, because it gives the ventricles time to fill and to expel a maximum amount of blood into the lungs and arteries, but, unfortunately, it at the same time contracts the arterioles and raises the blood-pressure, thus lessening the rapidity of the blood-flow and preventing a proper washing out of waste products from the tissues. In addition to this, if large doses be given, it impairs the irritability of the sensory and motor nerves and muscular fibres, and interferes with reflex action, effects that cannot fail to retard nutrition. Clinically it has been found unsatisfactory in those low states of the system brought about by high temperature and degeneration of the muscular tissues—notably of the heart itself—such as are found in typhoid fever. Recently a scientific teacher of therapeutics was quoted as recommending that digitalis be employed in typhoid fever, and that he had had most excellent results from its use. It is difficult to understand this opinion, as the same writer states in his book that he has seen digitalis produce, even in therapeutic doses, a dicrotic pulse, and numbers of authorities have, both by their writings and lectures, condemned it. The late Dr. James H. Hutchinson was very pronounced in his opinion against the employment of the drug in fever, and once told the writer that he knew of several cases of sudden death occurring in the course of fever that were unquestionably due to the digitalis administered. In the failure which accompanies simple organic disease of the heart itself, and in that which follows the shock due to hæmorrhage and similar conditions, digitalis is the proper remedy; but in the class of cases mentioned above it does not fulfil the requirements. The slowness of its action precludes its use in acute heart-failure, for, though given hypodermically, it is from two to four hours before its peculiar effect is manifested. Clearly, then, digitalis should be employed in only a limited class of cases, and is not the drug for the majority of emergencies.

Ammonia has been spoken of as the most powerful cardiac stimulant known, but its action is transient and of short duration. In some cases it does not act well. Wood speaks of it as being most serviceable in purely functional cardiac failure, and as not a reliable agent in that accompanying the adynamic fevers. To obtain from it a satisfactory effect it must be administered at short intervals, from every half-hour to one hour, and an insuperable objection to it is the fact that it cannot be used hypodermically without producing an inflammation at the site of the injection; and, in a disease like typhoid fever, fatal sloughing might result. It can be administered by the veins, but this is always a dangerous precedure, and it is doubtful if it be effective, as strong alkalies injected into the circulation of animals destroy the red corpuscles. It possesses the

advantage of not being followed by the depression of the nervous system which constitutes so objectionable a feature in the case of alcohol, but from its chemical properties it is difficult to use it in states of unconsciousness.

Atropine is justly regarded by many as a cardiac stimulant, and Harley has highly recommended it; but it is really more of a respiratory stimulant, and is only adapted to certain cases. Bartholow is inclined to doubt its usefulness in cardiac failure, since it exhausts the irritability of the heart ganglia; but, since the preliminary period of stimulation is well marked, he advises its use in temporary depression of the heart's action. When given in large doses it locks up the secretions and must necessarily interfere with nutrition and lessen the excretion of waste products, and, on this account, cannot be safely employed in uræmia.

Alcohol is a safe and effective heart-stimulant when intelligently used, and is probably the best general tonic in the list. It possesses the advantage of being comparatively non-toxic, and can be administered for a longer period than some of the other heart-tonics, without deleterious effects. Its influence upon the processes of nutrition renders it especially adapted to those long-continued cases of gradual circulatory failure that are encountered so frequently in the low fevers. But its effectiveness in cases of sudden or profound cardiac failure occurring in the course of acute maladies, such as pneumonia, in which large amounts must be given, either by the mouth or hypodermically, is open to doubt, since the profound depression that follows its exhibition in large doses must certainly conduce to an unfavorable result. It may be more correctly regarded as prophylactic rather than as an active combative agent.

Caffeine and cocaine have lately been much used as heart stimulants, and they are of undoubted value in simple weakness, when there is no reason to suspect that the weakness is a premonition of beginning failure. The action of the former is fugacious, owing to its chemical instability, and the writer has seen the delirium of typhoid fever markedly increased by cocaine. They, like alcohol, may be better classed as prophylactics.

Nitroglycerin is an active remedy in certain cases in which the heart is slow and weak. It paralyzes the inhibitory centres, dilates the arterioles, and with the increasing heart-action thus induced the circulation is rapidly promoted. A very interesting article on the comparison between the action of this remedy and digitalis lately appeared in the *British Medical Journal*, which serves most aptly as evidence that neither drug can be depended upon in all cases. The transitory impression made upon the heart by nitroglycerin compels the drug to be given in frequently-repeated doses, and its powerful toxicity renders it too dangerous for general employment. The writer administered it once with most happy results in a case of shock due to traumatism, the pulse increasing in three and one-half hours from 40 per minute to 78. In such instances there is, of course, doubt as to the part played by the medicine. A rapid heart would be a contra-indication to its use.

Ether acts quickly and is effective in some instances of cardiac failure following traumatism, but the effect is not sustained, and it is not advisable to give it for more than a short time.

Strophanthus, sparteine, convallaria, and adonis vernalis have not as yet been sufficiently studied to be considered.

In the array of remedies that are criticised above it is seen that none of them fulfils the indications for relief that are presented by most cases of heart-failure, without at the same time exhibiting deleterious counter-effects. An agent which will sustain the circulation must not interfere with the resulting good effects of such action by any secondary manifestations, and until one can be found that will behave in this manner the problem must be met by such a combination of remedies and methods as will most nearly resemble the desired drug.

The writer considers strychnine, if not the best, at least one of the best, cardiac stimulants available. A study of its physiological action undoubtedly shows that it, too, has objectionable features, but fortunately they can, to a certain extent, be mitigated by the conjoint use of other remedies. Strychnine is very diffusible; it acts quickly, and the effect is sustained. When a medicinal dose is administered hypodermically the heart at once responds by an increase in the strength of its movements, the arterioles contract, and the blood-pressure rises. At the same time the irritability of the sensory and motor nerves and the excitability of the muscular tissue are greatly increased, thus promoting nutrition-changes and mechanically favoring a rapid blood-current. A spasmodic contraction of the renal capillaries is likely to occur if large doses are given, but the interference with the kidney secretion can be obviated by diuretics having a selective action upon the urinary organs. Lately strychnine has been strongly recommended by some eminent observers as a reliable agent when other members of the group of cardiac tonics are contra-indicated, and to the writer, who used it a great deal while resident physician in the Pennsylvania Hospital, it has proved very satisfactory. The stimulation is not confined to the circulatory system, but is general, and in many respects very much resembles the effects of heat. Its characteristic effect upon the spinal cord no doubt tones up, so to speak, through the sympathetic nerves, the digestive

function, which with the diffused stimulation of the circulatory system must certainly result in a supply of better blood to the nerve-centres, and consequently to promotion of the vital functions.

A curious fact in connection with the action of strychnine is that the weaker the circulation the larger is the amount necessary. Its action seems to be in a way neutralized by the causes inducing the weakness, requiring in some instances rapidly-increasing doses to maintain the effect. Dr. C. B. Penrose informs the writer that he has given hypodermically as much as two grains of the sulphate of strychnine in twenty-four hours, with the result of successfully tiding the patient over a crisis.

This paper is intended as a preliminary to a more complete consideration of the usefulness of strychnine, and in a future article, now in course of preparation, the writer hopes to be able to indicate the extent and class of cases in which it can be effectively employed.—C. S. Bradfute, in *Med. Progress.*

NOTES ON CARDIAC DISTURBANCES.

Pye-Smith (Prog. and Treat. of Diseases of the Heart, Hunterian Society, Nov., 1890), gives an interesting summary of various forms of heart disease. He discusses *idiopathic tachycardia.* Here the number of beats is increased. The length of the first sound is diminished, and the period of rest is shortened. Many conditions may cause a temporary tachycardia in a perfectly healthy heart. Among these are exercise and mental emotion. If the causative condition be removed, the heart beats become normal. Any pulse constantly rapid—*over eighty beats per minute*—in an adult means the presence of disease, not necessarily of the heart. A physiological tachycardia is generally accompanied by palpitation. The condition is common where organic cardiac disease exists. The idiopathic form is rare and its prognosis is unfavorable. *The irritable heart* is closely related to excessive exercise or great bodily strain. Rest and careful diet are necessary in its treatment. The author's observations on the *intermittent pulse* are in keeping with those of other observers. Alone it is without significance and is most generally due to slight causes, such as gastric disturbance. Cases are mentioned where the condition existed for more than twenty years. Intermission with irregularity is of grave import, and indicates serious organic disease. *The pulse of high tension* is generally associated with interstitial nephritis. It indicates renal change, and when found should always require an urinary examination. The views expressed as to its importance are open to criticism. It is true, as the author says, that the increase shows that cardiac nutrition is going on well, but it certainly is not an indication of healthy or desirable condition. *Hypertrophy from overstrain* is found most commonly in athletes or in young boys whose development is not complete. Remedies aiding cardiac nutrition are indicated, but many cases do not respond to treatment. *Rapid dilatation, per se,* is met with as a secondary condition to certain acute affections, such as rheumatic fever, scarlet fever, acute nephritis, and other febrile disorders. Although not stated by the author, it is probable that the dilatation is here so rapid that there is not time for the hypertrophy to develop. Fatal syncope is to be dreaded in this condition. Various forms of alcohol are the remedies to be used in combating this acute affection. It is interesting to note that the author does not believe that fatty degeneration is common in heart affections.

There is but little evidence on physical examination to throw light on the subject. An excessive growth of fat over the heart may, it is stated, interfere with perfect action and produce ill effects. *Fatty degeneration is always found in phosphorus poisoning.* The discussion of valvular lesions commences with the subject of ulcerative endocarditis in which the presence of auto-infection from the inflammatory condition is well brought out. The author terms it an "internal pyæmia." The situation of the inflammation is such that the products of suppuration are being constantly carried to distant parts of the body, causing secondary troubles. For the term pulmonary, in describing stenosis and regurgitation, the author substitutes "dextro-sigmoid." Valvular lesions with their accompanying muscular changes have always different prognoses than the hypertrophies and dilatations occurring without valvular disease. Aortic regurgitation is regarded by the author as the lesion of greatest seriousness, of most rapid course, of least responsiveness to treatment, of greatest tendency to sudden death. Aortic stenosis is put down as having the best prognosis. Cases of mitral regurgitation respond best to treatment, and even if grave secondary changes have occurred, if cardiac nutrition can be established, the same holds true. The author gives certain statistics of heart cases in Guy's Hospital. There were 95 fatal cases of aortic disease; 69 of these had mitral disease (secondary). The ages were as follows: 1 under 10; 14 between 10 and 20; 40 between 20 and 40; 33 between 40 and 60; and 3 above 60. There were 41 cases of death from mitral disease. There were 6 between 10 and 20; 14 between 20 and 40; 20 between 40 and 60; and 1 over 60. Of 34 cases in which death was due to cardiac syncope valvular disease was found in 21 cases. The duration of organic disease of the heart is larger in women than men. In prognosis the nature of the life led is most important. Secondary diseases, acute in their character, affect the diseased heart unfavor-

ably. The author records many cases where the disease had long existed. One case of aortic regurgitation had existed for ten years; another of double disease had existed for twenty years. One case of aortic stenosis had lasted many years, the patient dying at the age of seventy-five. The influence of rest and proper diet in the treatment of organic heart disease is well illustrated in a case of the author's. The patient was a London cabman, exposed to all the inclemencies of the weather, having mitral regurgitation, who was admitted into Guy's five times with a staggering heart. Four times he was dismissed improved, and returned to work. The last time the case resulted fatally. The author condemns Oertel's treatment, on the ground that forced gymnastics are always to be avoided. The most excellent and important part of the paper are the paragraphs describing ulcerative endocarditis.—*Brooklyn Med. Jour.*

EXAMINATION FOR TUBERCLE BACILLI.

Since it has been demonstrated beyond doubt that bacilli are the generators of tuberculosis in all the organs, it is evident that a thorough and careful examination of the sputum for them is of utmost importance in order to settle the question of whether we are confronted with a case of tuberculosis or not. As Koch says: "The bacilli are not the only cause of tuberculosis, but they are the only cause of it; and there is no tuberculosis without bacilli."

Koch's method of treatment of tuberculosis is not directed against the bacilli proper; it does not directly kill them, but it destroys the tissue containing them. It is this tissue which is reached by the specific action of his remedy. The resulting necrobiosis involves tissue destined to become eliminated. The system endeavors to rid itself of it by the proper means for each organ. It will be raised and expectorated by cough in phthisis; it will exude on the surface of the skin in lupus.

But the case has an entirely different aspect if we do not succeed in demonstrating the presence of bacilli in the sputum. I have met with cases where all the symptoms pointed with a fatal certainty to the existence of phthisis, and yet the bacilli of tuberculosis were absolutely wanting. In a case of this character the patience of the physician is put to a severe strain. In one case observed by me, no fewer than forty specimens had to be examined before the long-sought-for little red bacilli could be brought to view under the microscope.

The lack of turbercle bacilli is, therefore, not an evidence of the absence of tuberculosis. It is possible that in a given case the bacilli may be very few, since their number is in some measure dependent on many causes. There may be present in the lungs an encysted collection of bacilli utterly without connection with the outside world. Such cases are those of so-called latent tuberculosis, where after a seeming cure, cheesy masses and chalky deposits form themselves into concrements, become encysted, and represent a condition hitherto known as innocuous cicatricial healing. Such a tissue may contain bacilli, but only to a very limited extent. Now, if they, for some cause or other, migrate into the adjacent tissue, they will naturally find a soil suitable for their development, will multiply, and, of course, appear abundantly in the sputum. Another possible cause for the temporary absence of tubercle bacilli, is presented in many cases of cavities in the lungs. Here again we may be confronted in the first place with a mechanical difficulty, such as an obstructed, twisted bronchus, bronchial glands, inflammatory contraction, or perfect occlusion of the same. Then, again, it is possible that by an acute or subacute inflammation, the surroundings of the cavities may become hyperæmic and the seat of pneumonic infiltration. In such a case the tubercle bacilli will again be found very scarce, or altogether absent until lysis sets in.

These are only some of the possibilities which should put the physician on his guard in making the final diagnosis in cases where the tubercle bacilli are temporarily absent from the sputum. Although the demonstration of the presence of tubercle bacilli is not altogether a complicated affair, yet a degree of experience and certain physicial appliances are necessary in order to enable one to work with ease, cleanliness, and some skill.

To accomplish these, I may be permitted to describe the several phases of examination of the sputum from the moment when it is submitted to our investigation.

It is a very sensible method to collect the sputum, if possible, in a glass jar which has a graduated scale in cubic centimetres burned in its walls, in order to ascertain the quantity of expectoration. We now empty the contents into a soup-plate, the hollow of which should have been painted black. This has the advantage that the grayish-white masses appear more distinctly on a black ground and are more easily discernible. The sputum, which in the jar has appeared in strata, will now become one floating mass in which serum, mucus, cheesy masses, and pus conglomerations are lying side by side. We now get our microscope in readiness by focussing it. A good bacterial microscope ought to be provided with an oil-immersion lens, an Abbe's condenser, and an iris diaphragm. This latter is an effectual device in place of the old diaphragm plate.

Two cover-glasses and one glass slide are now

taken and carefully cleansed. This and one of the covers are meanwhile placed on a quadrangular black glass plate about four by six inches in size. This little contrivance will prove very serviceable, inasmuch as it makes slides and covers put on it recognizable. It is a veritable saving institution and will diminish the bill for glass accessories. The second cover is now placed between the thumb and the index finger of the left hand, while the right hand seizes a stertilized platinum loop, lifting out sputum from the plate of the size of about half a pea, and depositing it upon the cover-glass.

Care should be taken to avoid catching salivia or mucus with air bubbles.

After some experience one will soon be enabled to distinguish pus or cheesy masses. The latter are a veritable bonanza for the tubercle bacilli. We must, however, be prepared, in searching for cheesy masses, to find instead expectorated stomach contents closely resembling the former. Such errors occur very frequently. The true character of these masses, however, is only revealed under the microscope after laborious preparation of specimens. In cases of this kind we may find, instead of the tubercle bacilli, swollen starch granules or disintegrated meat fibres.

Having now placed the pus or cheesy mass upon the cover, we distribute it evenly with the loop and remove any superfluous remnants. The second cover is now placed on the top of the first, and both are moved in a sliding manner upon each other in different directions. By this we insure a still more even distribution of the sputum, and avoid an accumulation on the edges of the covers. In this way we have gained two specimens for further use.

We now place each cover, with the preparation side upward, between the thumb and the index finger of each hand, swinging them to and fro over the minute flame of a Bunsen burner, for from half a minute to a minute until they are dry. Care should be taken to avoid scorching of the specimens, which would inevitably destroy the tubercle bacilli. This done, each cover-glass is seized between the branches of a pincette—Dr. Cornet's self-closing pincette is the best in this case—and is drawn three times in rapid succession transversely through the developed flame of the Bunsen burner. A spirit lamp will answer the same pupose, although not so handy as the former.

Now follows the second part, the staining of the specimens. Let us now take a small tripod, place a wire net over the opening, and lay a hollow hour-glass upon it, in which the required staining fluid is contained. Place now a spirit lamp—a Bunsen burner is preferable—under it and heat it. Our staining fluid consists of an alcoholic solution of carbolized fuchsine. The formula is :

Fuchsine,	2	parts
Alcohol,	20	"
Carbolic acid,	10	"
Distilled water,	200	"

Now take one of the specimens between the thumb and the index finger of the right hand and place it carefully—always with the prepared side *downward*—upon the staining solution. As soon as the first bubbles appear and boiling sets in, turn the flame down and leave the specimen in the hot staining solution for not less than five minutes.

The specimen is now lifted out with a pincette and rinsed with distilled water. Hold the specimen with the preparation side downward until the water flows off colorless.

Any regular fountain syringe or irrigator, such as is found in every office, will answer the purpose where other more complicated appliances, such as a glass reservoir or a system of tubes and pipettes, are not at hand. Care should be taken not to direct too heavy a stream of water upon the specimen.

It is now necessary to dry the specimen by means of blotting paper, after which it is again placed—prepared side downward—for a minute and a half in a cold solution of methylene blue (a mixture of 3 parts of methylene blue, 50 of dilute sulphuric acid, and 200 of distilled water). It is now lifted out, rinsed, and dried as before. This completes the second, the staining, act ; and everything is now ready for the microscopical examination.

A drop of the so-called " preparation " cedar oil (a mixture of cedar oil and glycerin) is now placed on the slide, and the cover-glass, with the preparation side downward of course, is pressed gently upon it. Another drop of " immersion " (clear) cedar oil is finally placed on the top of the cover, and the specimen is placed under the microscope.

A specimen thus prepared will bring into full view even solitary tubercle bacilli. The entire specimen prepared according to this process will be found stained bluish-purple, and the tubercle bacilli lie in it as red rods 1·6 to 3·5 μ in length, singly and in groups or in heaps together. A picture is formed which, once seen, cannot easily be forgotten.

In taking the liberty of describing this method of examination, I have given it simply as I was taught to use it in the richly endowed laboratory of the new City Hospital " on the Urban," in Berlin. I have studiously avoided describing more extensive and cumbersome apparatuses, in order to facilitate the method of observation to the practitioner. Much can be done with a small outfit.

It is doubtless true that there will be cases where a more intricate examination and counter-

tests will be needed. In such cases, of course, the facilities of a well-equipped laboratory are necessary.—Dr. Ludwig Weiss in *N. Y. Med. Jour.*

MEDICAL EDUCATION.

The address recently given by the Hon G. W. Ross, Minister of Education, in the theatre of the Normal School Building, of which an extended report was given in Saturday's *Globe*, contains an interesting survey of the development and growth of public school education in Europe and America. The address shows the results of a good deal of historical reading, though from the sociological or philosophical point of view it is, perhaps, a little disappointing. From the Head of the department of public instruction, in the largest and wealthiest Province of the Dominion, we should have been glad of some discussion of fundamental principles. It is obvious, for instance, that the more universally education and the enlarged intelligence and thoughtfulness it brings become diffused among the people, the more needful will it be that the relations of the State to the work of public education shall be clearly defined and broad-based upon some principle that can be defended as just and equal. So far as the public schools are concerned there is no room for doubt or cavil. They are for the children of all the people, and it is meet that they should be supported at the expense of all the people. It was when the Minister came to the universities that he failed to apply principles, and appealed to precedents only. After quoting numerous facts to show, what needed no proof, viz., that the "tendency across the water is to be generous with the universities, notwithstanding"—an objector might say because of—"the conservatism of those countries," Mr. Ross went on tc say, "Surely we in Canada should fortify ourselves to deal liberally with the universities." If he means that this liberal dealing should be of the kind which he afterwards recommends, the outcome of the patriotism and generosity of the people, all will heartily approve his words. If the idea is that further aid should be bestowed upon the provincial institution from the public chest, some troublesome questions will at once arise. Does Mr. Ross maintain, for instance, that it is in the interests of the whole people that students should be trained for the medical profession at the public expense? A few moments of his lecture might at this point have been well devoted to showing how it can be for the good of the people that the University, the entire resources of which are imperatively required to maintain and increase the efficiency of its Arts work, which is, *par excellence*, the department of its work which interests the public, should have been permitted by the Government to sink so large an amount of its avaliable funds in the new Science Buildings, which are admittedly far more extensive than can be required for the science work of the Arts course proper. Will not the public justly hold the Minister responsible for the mistake, not to say misappropriation, which was made when one of the six independent medical colleges of the Province was chosen to be the ally and beneficiary of the Provincial University, to the great, and, so far as appears, just dissatisfaction of all the friends and patrons of the other five, thus unfairly discriminated against? The injustice of this diversion of the public funds appears all the more indefensible in view of the recent protest of the teachers in the Department of Modern Languages in the University, some of whom have been kept working as mere lecturers, with inferior *status* and smaller pay, for more than twenty years. It is said that the promotion of these to the position of "professors" is impossible for want of money. Certainly, if most of them are not qualified for professorships they ought to be, and it would be little to the credit of the University to have kept incompetent men so long in teaching positions of so much importance. But if an act of simple justice is denied or delayed for want of funds, while enough and much more than enough of capital has been sunk in buildings not needed for the proper educational work of the University, the fact is one of a kind not well adapted to encourage the public to deal more liberally with the Government institution under which such maladministration is possible. —*The Week.*

ANALGESIC EFFECTS OF EXALGINE.

Dr. Gorodichze having undertaken a series of investigations as to the therapeutic properties of this new drug, reports his observations on fifty-four patients. He prefaces his communication by remarking that in the treatment of disease our efforts must always always be directed to comfort our patients by suppressing the pain, and that his investigation was confined to patients in whom pain appeared to be most excessive.

The size of the dose which is employed in all known analgesics, such as antipyrine, acetamilide, phenacetine, and others, without speaking of the anæsthetics, often leaves behind circulatory and calorific disturbances (lowering of temperature, cyanosis, eruptions of the skin, etc.), whereas he found exalgine acted on a comparatively small dose. He had only in three cases out of fifty-four found that the application of this drug had been followed by vertigo with sensation of heat in the stomach, which trouble was, however, slight.

Profs. Dujardin-Beaumetz, and Bardet were the first who brought to light the analgesic properties of exalgine in their communication to the Accadémie de Medicine in March, 1889. Since then the drug has been experimented with by

Prof. Desnos, of La Charite, Prof. Frazer, of Edinburgh, Dr. Rabow, and others, who appeared to agree that our armamentarium has been enriched by a remedy superior to antipyrine which has been so much employed lately.

The following are the results of the fifty-four cases referred to, all being adults. In every case exalgine was prescribed in the following formulæ:

Exalgine, 7.80 centgr. = 12 grains;
Alcohol 1.0 grammes = 25 grains;
Eaude melisse 100 grammes = about 4 oz.

To be taken in two doses with eight hours' interval, the dose being the same in every instance.

The fifty-four cases may be subdivided thus:—

	No. of Cases.	Successful	Unsuccessful
Migraine	12	10	2
Cephalalgia of influenza	6	6	0
Sciatica	4	4	0
Muscular rheumatism	2	1	1
Angina pectoris	3	2	1
Dysmenorrhœa	7	6	1
Tranchics uterines	2	1	1
Neuralgia	10	9	1
Blenorrhagia	1	0	1
Chronic pelvic peritonitis	2	1	1
Zona herpes	2	2	0
Viscualgia tabetic	3	2	1
Total	54	44	10

From the foregoing table it will be observed that the principal action of exalgine is on neuralgic pain such as migraine, facial neuralgia, herpes zona. Contrary to Prof. Dujardin-Beaumetz's observation, that hyperthemisa was a contra-indication for exalgine, Dr. Gorodichze employed it in six cases, in all of which the cephalalgia, so intense in influenza, disappeared in one or two hours without any depressing condition for the patient, and he concludes by remarking that the remedy has rendered good service in dysmenorrhœa in five out of the six cases in which he employed it (in two of which cases three grammes, forty-five grains, antipyrine had not the slightest effect), and this confirms in his opinion and in that of other investigators, the superiority of exalgine in similar cases over antipyrine.—*Paris Correspondent Med. Press and Cir.*

ELECTROLYSIS OF GOITRE.

In making supplementary remarks upon a subject which was discussed at length in the *Lancet-Clinic* of September 10, 1890, I do so in response to a number of inquiries from members of the profession in reference to a point which was at the time of the discussion in these columns necessarily undecided. It is not my intention to further illustrate the subject of electrolysis by the recital of additional cases, although I have had, since my report, quite a number of new cases under observation. The unusually large number of cases, presented in the first report, was a source of surprise to a great many, as could be gleaned from some of the inquiries received. It is accounted for by the fact that the two first patients, being members of a well-known family, and among the most successful of the whole number of cases, were the subject of an article which appeared in a daily paper of large circulation. More than a dozen patients presented themselves for treatment within one month after that publication.

The results of the electrolytic method certainly removed all doubt as to the efficacy of the galvanic current in many cases of goitre. Time alone, however, could decide *whether these results would be lasting or not.* It is this point which I wish to briefly consider in response to a number of interrogations. In my report of last September there were considered two distinct electrolytic methods, namely: *electrolysis* proper, (cutaneous galvanization), and *galvano-puncture* (introduction of the galvanic needle). This division will serve us well is discussing the point at issue.

In reference to the cases, treated by *cutaneous galvanization*, the ultimate outcome of the treatment fully vindicated the opinion as to its relative value, which we ventured in our report. Diminution of the size of the tumor was tolerably well marked in some of the cases after the electrolytic method had been given a few weeks' trial. In other cases the effect was slow and barely visible. The interval of time, which has elapsed since the treatment of these cases by cutaneous galvaniza tion was suspended, seems to justify us in considering the action of the galvanic current in the light of *a temporary benefit only.* For, in every instance, there has taken place a gradual re-establishment of the original condition. The tumors have eventually returned to their former size. In two of the cases the tumors are indisputably larger than they were originally. A strange phenomenon was the fact that the speed with which the secondary enlargement took place, apparently was in direct proportion to the degree of rapidity which characterized the beneficial action of the current in each case. Without assuming to explain this interesting feature, we may, in harmony with our previously expressed opinion, dismiss the subject of cutaneous galvanization by pronouncing over it the *mene tekel phares* of practical experience.

A not inconsiderable number of my goitre cases were treated by *galvano-puncture.* Not one of these has demonstrated any tendency to recurence. Galvano-puncture, then though not with out peril to the patient, and requiring for its ex ecution a certain amount of surgical dexterity,

or rather upon the grounds of my own limited observation seems to be *absolutely and permanently curative*. When the process of inflammatory absorption, set up by the needle, is at an end, the tumor will be found to be markedly diminished in size. Small cicatricial nuclei, freely movable below the skin, usually mark the point of introduction of the needle. The systemic disturbances, spoken of by some as the invariable result of the removal or destruction of goitre-tissue I have not had occasion to observe. Some constitutional re-action, however, is indicated by the fact that the characteristic neurotic element, invariably present in cases of enlarged thyroid, will be markedly modified, and not infrequently be caused to intirely disappear, *pari passu* with the shrinking goitre.—Dr Juettner, in *Cincinnati Lancet-Clinic.*

NOTES ON THIOL.

Thiol, which we have, at various times, during the past year and more, mentioned and described fully in this journal, is receiving the attention now which its greater purity and other manifest advantages over ichthyol justify. Thiol in its chemical constituency and therapeutic action is identical with ichthyol, and in dermatological and general therapeutic practice, its use is indicated in all those cases where ichthyol has been advantageously employed. The reasons for giving thiol the preference over ichthyol are many and important, but the principal one is its superior chemical purity and consequent freedom of all toxic dangers. The chemical and physical actions of thiol and ichthyol are the same; both dissolve readily in any proportion of water; both yield clear, dark brown solutions, which are perfectly neutral; but chemically thiol is purer than ichthyol; ichthyol containing an excess of waste products of evil odor, and 4 per cent. of sulphate of ammonium—an undesirable by-product of the process of distilling and neutralizing the crude stock; thiol has only a faint, not unpleasant, bituminous odor, and retains only 1 per cent. of the sulphate of ammonium.

Another desirable property—not possible in ichthyol—is that thiol can be produced in dry form, either in scales or powder. This permits of dry application, a favorite method in antiseptic and surgical practice at the present time. Thiol, pure and non-toxic, has been successfully employed by internal administration also.

The following formulæ are compiled from the favorable clinical reports of such leading practitioners as Dr. Paul Geserich, Berlin, Dr. A. Zeeden, Dr. L. Reeps, Dr. F. Buzzi (Schweninger's Clinic in Berlin), Prof. Dr. Neisser, Breslau, Dr. A. Bidder, and Prof. Dr. E. Schwimmer, Buda-Pesth—surely a list of authorities whose favorable verdicts on thiol bear the greatest weight and are its best recommendation.

THIOL SOLUTION.

1. ℞.—Thioli liquidi
Aq. dest. aa.....15 g.
S.: Apply with c. h. bru-h.

THIOL SOLUTION.

2. ℞.—Thiol. liquid.....20 g.
Glycerin.....10 g.
S.: Apply with c. h. brush.

THIOL DUSTING POWDER.

3. ℞.—Thiol. sicc. pulv....25 g.

THIOL DUSTING POWDER.

4. ℞.—Thiol. sicc. pulv.....5 g.
Amyli tritici.....20 g.
Talc. ppt.....5 g.

THIOL SALVE, 10 %.

5. ℞.—Thiol liquid.....5 g.
Adipis suilli.....45 g.

THIOL-LANOLIN SALVE.

6. ℞.—Thiol. liquid. 5 or 10 g.
Blancolini.....20 g.
Lanolini.....70 g.

THIOL-COLLODIUM, 5 %.

7. ℞.—Thiol. sicc. pulv....5 g.
Collodii.....95 g.
Solve.

THIOL WINE.

8. ℞.—Thiol. sicc.....1 g.
Vin. Med. Tokay....99 g.

THIOL CHOCOLATE.

9. ℞.—Thiol. sicc. pulv.....2 g.
Chocol. opt.....98 g.

THIOL PILLS.

10. ℞.—Thiol. liquid.....5 g.
Pulv. Althaeæ.....q. a.
ut fiant pilul. No. 50 o duc. Sacchar.
S.: Take 2 pills 3 or 4 times daily.

—*Notes on New Remedies.*

THE THERAPEUTICS OF EXOPHTHALMIC GOITRE.

At the meeting of the New York State Medical Association, held October 22, 23 and 24, 1890, Dr. E. D. Ferguson, of Rensselaer County, read a paper with this title. Exophthalmic goitre, he said, was not a common disease, and yet it was not so rare as to render it a curiosity. Though the disease was one with sufficiently well-defined characteristics to allow of its ready recognition, still errors of diagnosis might, and doubtless did, occur. The fact was that enlargement of the thyroid body was not peculiar to the disease, and that a frequent pulse was attendant on a multitude of morbid conditions, and occasional prominence of the eyes might be added from causes not the same as the condition determining the development of exophthalmic goitre. The conclusion that the condition was not at any rate a pathological unit had been strengthened, in the judgment of the writer, by the results of the use of digitalis, for in every instance in which he had felt confident of the diagnosis, that drug had not only failed to afford relief, but was apparently productive of injury. The writer then gave in detail the histories of several cases of exophthalmic goitre treated with strophanthus. The administration of this had afforded prompt relief, the patients being able to return to their ordinary occupation. In no instance had either the exophthalmia or the goitre been entirely removed, and, so far as the latter was concerned, the author would not expect its removal, for when the enlargement had existed for some time it became of so dense or fibrous a consistence as to preclude the idea of its complete removal. There was however, a notable degree of improvement both in the

exophthalmia and in the thyroid body, but it was impossible to express in mathematical terms the changes in these features of the disease so well as could be done in the rate of the pulse. Not only were the rate and rhythm of the contractions favorably influenced, but in these cases there undoubtedly existed a dilatation of the left ventricle, which improved so as to leave no physical or symptomatic evidence of cardiac lesion. Recent pathological considerations tended to place exophthalmic goitre in the category of the neuroses, and the locus of its origin in the floor of the fourth ventricle. Still, the evidence was not such as to give any clue concerning its etiology or treatment, aside from clinical observations, and consequently there was no explanation to offer as to the method by which strophanthus afforded relief, aside from the idea that first suggested its use, and that was to relieve an apparently overtaxed heart through the lessening of the resistance in the systemic circulation which was alleged to be its action. Aside from any theoretical consideration as to the way in which the agent acted, the fact remained that benefit was apparently the direct result of the use of strophanthus,—a benefit so notable as to almost justify the announcement of a cure in some of the cases. The only preparation used by the writer was the tincture, given by the mouth, three times daily at each meal, the initial dose being from 8 to 10 drops, which was increased, if necessary to reduce the frequency of the pulse, to 15 or 20, or even 25 drops. Whether its apparent utility would bear the test of time and larger experience was still problematical. At present it seemed to be our most valuable therapeutic resource in exophthalmic goitre.—*New York Med. Jour.*

ALBUMINURIA OF PREGNANCY.—The diagnosis of the Bright's disease of pregnancy is so easy as to require no notice here, but I may say that it is still too common to allow pregnant women to go to term without examination of the urine.

The prognosis is, however, of such importance as to demand closer attention, especially in connection with treatment, and to this I desire to call attention as the most important part of my paper. In the first place, the acute nephritis of pregnancy is much more serious than acute nephritis from any other cause, while uræmia is the dangerous symptom which is responsible for the fact, so much so that if this danger be escaped the prognosis becomes quite favorable, even more so than in acute nephritis from other causes. Rosenstein has shown that convulsions occur in about one-fourth of all the cases, and that about 30 per cent. of the eclamptic cases die. This mortality, which certainly is not overstated, it seems to me can be diminished. Scarcely a week passes in which some valuable life is not sacrificed to errors of practice under these circumstances, and this will continue to be the case until the profession is thoroughly aroused to a closer study of the complication in question. I have called attention to certain conditions, or combinations of conditions, under which Bright's disease associated with pregnancy demanded that premature labor should be induced to save the life of the patient.

It remains to point out briefly the treatment which should be adopted in cases where it is concluded to attempt to prolong gestation to the viable period or the end of pregnancy. To keep up elimination and thus to prevent the over-accumulation of toxic substances in the blood, is of course, the first indication. And while the kidneys present themselves as the natural channel through which this is to be accomplished they are seldom sufficient; and the bowels become the next, and indeed often the first and most convenient medium. Especially should constipation be avoided, while a brisk purge has often averted an uræmic attack. Continued looseness of the bowels is a safety valve, which in these cases can scarcely be abused. The skin is also a serviceable medium for elimination, and is continuously availed of by warm woollen clothing next the skin, the effect of which is increased by the uniform temperature of the bed. Daily warm or hot baths, according as to which may be found more efficient, increase this affect, while the simple spirit of nitrous ether in full doses is a double agent acting upon the kidneys as well as most efficiently favoring the action of the skin. Jaborandi or its active principle pilocarpin in small doses, just enough to keep up a gentle but constant action of the skin, is also valuable. The hot-air bath or vapor bath may also be used with excellent effect. These are cases, too, in which a diet of pure milk or milk diluted with water or carbonic-acid water diminishes the dangers with which the patient is threatened.

When uræmia actually sets in, any or all these agencies, except possibly jaborandi, may be employed in increased doses if available, but whatever may be the hesitation of inducing premature labor previous to its appearance, there should be none after it.—Tynan, *Medical Record.*

HÆMOPTYSIS IN APPARENTLY HEALTHY PERSONS.—Hæmoptysis is a symptom which has always a serious aspect about it, causing both physician and patient to be apprehensive of impending pulmonary tuberculosis; but that too much significance should not be assigned to it *per se*, is shown by the report of some cases published by Dr. Newman. In the first case a man, aged forty-nine, complained of frequent attacks of hæmoptysis, the amount of blood lost varying from a few drops to an ounce and a half. Despite the attention of many practitioners from time to time, the attacks continued, and had lasted for sixteen months before he came under the care of the

author. No physical signs were discoverable in the chest, and the patient's health was good. Inspection of the larynx and trachea, the latter being visible as far as the bifurcation, failed to show at the first three examinations any morbid condition. At the fourth examination the larynx and trachea were observed to be tinged with blood; and after the patient had cleared the air-passages as well as possible by coughing, a small bleeding point was noticed immediately below the anterior commissure. The blood oozed from it slowly and trickled down the trachea. With local treatment the hæmorrhage ceased and complete recovery followed. In another case the hæmoptysis had continued for nine months, the patient being a man aged fifty-six; the amount of blood lost varied between an ounce and an ounce and a half, and the attacks usually occurred once a month. No physical signs of phthisis could be detected in the chest. After, however, a large hæmorrhage, the naso-pharynx, pharynx, larynx, and trachea were carefully examined. The two latter were deeply blood-stained as far as could be seen, but no bleeding point could be discovered; but two days afterwards a little erosion was observable on the anterior aspect of the trachea, just below the cricoid cartilage, and the surrounding mucous membrane was moderately injected. Two days subsequently to this the lesion just described had completely disappeared. Twenty-six days later the hæmorrhage recurred, and the lesion referred to was observed for a second time. Local treatment was persisted in for six weeks, and a complete cure was accomplished. In a third case the hæmorrhages were more serious. On one occasion a pint of blood was lost. After one severe hæmorrhage an examination was made by the author. The pharynx and soft palate were swollen and relaxed, and the vault of the pharynx was very shallow from before backward. On the upper and back part of the pharyngeal arch a number of distended viens were discovered. At the beginning of the examination these varicose veins were intact, but from the irritation produced by instruments, bleeding was induced which continued till the next day. The first treatment adopted was the employment of solid chromic acid to the distended veins. This failed, however, to effect any improvement, and a few days afterward electrolysis was employed, the positive pole being applied to the pharynx, and the negative to the neck. This treatment was adopted on three occasions, with the interval of a week intervening. Ultimately the veins were completely occluded, and three years later the patient had never had any return of the hæmorrhage.—*Medical Press.*

A CLINICAL NOTE ON THE SOPORIFIC ACTION OF MERCURY.—I am not aware that the above action of mercury in the class of case I am about to describe has been recorded. No doubt the fact is known to many of you, yet it does not appear to me to be so generally, and that is my reason for bringing the subject forward at this meeting.

The cases in which I have found blue pill—for this is the form of mercury I am referring to—give such good soporific effects are rather difficult to describe, and must be given in a more or less general way. Many men would call them cases of biliousness, and for want of a better term I am content to use it. The patients are generally over forty, complaining of lassitude, loss of appetite, a general fulness of the abdomen, pains in the shoulder-joints, tongue generally of a whitish brown color, a nasty taste in the mouth, eyes are rather "thick," a want of clearness of thought, more or less dull pain in the head not confined to any one particular spot, irritability of the skin, and, above all, sleeplessness at night. There may be many more symptoms and signs than the above, or few of them may be present, but, when the symptom of sleeplessness is prominently complained of, it is here that we find the soporific action of blue pill followed by saline draughts peculiarly brought out Now, the symptoms detailed are principally those found under the heading of bilious dyspepsia, but there is this important clinical difference: whereas sex, richness of food, want of exercise play important parts in producing the above form of dyspepsia, the cases that I have in mind are found as often, if not more so, in women, and where the plainest diet and moderate exercise have been taken.

There is a little doubt that the sea air has something to do with the above state of health; people who have come down to the seaside after a long residence inland frequently develop after a few days' sojourn all the afore-mentioned symptoms. I believe that we who practice in seaside resorts would less often be called upon to prescribe for this condition were a little mercurial taken immediately by the patient on his arrival, but perhaps, on the whole, this had better be left in our hands.

Again, I do not associate these cases with those which are commonly called "lithæmia," or the substitution of uric acid for urea as the final product of disintegration of albuminous substances within the body: under this last condition you obtain the more remote symptoms of gout.

What is the exact action of the mercury which brings about the above happy result I do not know, nor am I anxious to speculate or propose theories. Murchison supposed that it possessed a double action, for whether or not the secretion of bile was increased, there was certainly more bile passed when mercury was being taken; thus an eliminating action was brought about, so that less of the bile constituents were absorbed from the intestines than usually. Again, he supposes, in some way or other, the albumen is more thoroughly disintegrated. But what is important for us to know is

the use of a drug which will enable you to give your patient a good night, whilst at the same time you are treating the root of the disease, and apparently not giving ordinary soporific drugs.

It is needless for me to use any padding to this paper in the way of quotation of cases; they would be uninteresting and wearisome; and the title of my paper does not admit of it.—*Brit. Med. Jour.*

INOCULATION BY MOSQUITOES AGAINST YELLOW FEVER.—Drs. Finlay and Delgado, of Havana, have published in the *Revista de Ciencias Médicas* ome statistics of their practice of inoculating persons newly arrived in Cuba against yellow fever by means of mosquitoes which have been caused to contaminate themselves by stinging a yellow fever patient. These observations have been carried on for the last ten years, and, in addition to a certain number which are still incomplete, may be said to consist of fifty-two cases of mosquito inoculation which have been fully followed up. Of these, twelve experienced between the fourth and the twenty-sixth day after inoculation a mild attack of yellow fever, with or without albuminuria; twelve experienced no symptoms of yellow fever either within twenty-five days after the inoculation or during three years subsequently; twenty-four experienced no symptoms within twenty-five days, but contracted a mild attack before the end of three years, either uncomplicated by albuminuria altogether or with only a very transient appearance of it; three who had had no symptoms within twenty-five days contracted well-marked yellow fever within three years; one patient who had a mild attack in consequence of inoculation contracted a severe attack later on, which proved fatal; that is to say, that of those who had been inoculated only about eight per cent. contracted the disease in a well-marked form, with a mortality of under two per cent. In order to enable us to appreciate the significance of these figures, the authors mention that they observed sixty-five monks, who from time to time arrived in Havana, where they all lived under similar conditions. Thirty-three of these were inoculated, and thirty-two were not. Only two of the inoculated contracted well-marked attacks, which, however, did not prove fatal; whereas eleven of those that had not been inoculated were severely attacked, no less than five dying. It is remarked that inoculations performed in the cold weather are not entirely trustworthy, and that they should be followed up by a repetition in the spring; also that experience shows that a person who has been three years in the city without contracting the disease has become "acclimatised," and is very unlikely to be attacked at a subsequent period.—*Lancet.*

SEXUAL LIFE OF WOMEN AFTER CASTRATION.—At the Berlin Medical Congress, Dr. F. Deppler, of Venice, read a paper embodying the results of a study he had made in the cases of ovariotomy performed by himself. He had performed castration forty-six times, obtaining a cure in thirty-nine. These operations were performed for the relief of purulent or gonorrhœal salpingitis, oöphoritis, fibroid tumors of the uterus, etc. The following were his conclusions, derived from a study of the physiological consequence of these operations: 1. When the operation was performed on account of salpingitis or other inflammatory process, uterine hæmorrhage never occurred subsequently. 2. The conjugata became gradually shortened, and this was the more marked the younger the individual was when operated upon. 3. The uterus became atrophied, the vagina grew shorter and narrower, its mucous membrane became paler, and the labia majora were somewhat thinned. 4. The breasts grew smaller, acquiring a strong resemblance to the pale mammæ. 5. The brown pigmentation of the nipple, areola, perineum, and anus disappeared wholly, as did also pathological pigmentation existing in some of the cases; the hair also turned white. 6. The tendency to embonpoint, which is generally believed to exist after these operations, was not observed by the author. 7. No changes was observed as regards the growth of the hair or the tone of the voice. 8. The sexual desire remained, and was the more pronounced the earlier in life the operation was performed. 9. The operation offers no impediment to marriage; three of the author's cases had married and had lived happily with their husbands for years. 10. A marriage with a castrated women is the ideal Malthusian marriage, and the only way the Malthusian idea can be carried out without endangering the health and happiness of the woman. 11. In the cases operated upon in early life for inflammatory conditions, no neuroses were seen to develop, which was not the case when women were operated upon late in life for fibroid tumors of the uterus. 12. A favorable influence upon the hæmorrhage was observed after operation for myoma, yet in no case did the menopause at once set in. 13. In cases of operation for uterine fibroma, the patients, even those in full maturity, lost all sexual inclination after the operation.—*Medical Press and Circular.*

THIOL IN SKIN DISEASES.—Prof. E. Schwimmer, Buda-Pesth, is cited in the *British Journal of Dermatology*, September, 1890, as recommending thiol as useful in erythema, dermatitis herpetiformis, herpes zoster, acne rosacea, and acne vulgaris faciei, in papular and weeping eczema, as also in the treatment of burns, etc. It is generally applied in the strength of a one-in-three aqueous solution. Prof. Schwimmer was especially struck by the exceedingly satisfactory results he obtained with it in the treatment of herpes zoster and der-

amatitis herpetiformis. Of the latter disease a case had been ineffectually treated for three months with other remedies, but healed promptly in the course of a week when thiol was applied. The patient was painted regularly twice daily with the solution for two or three days, and the skin then carefully washed with pure water. It was found that the vesicles and bullæ had disappeared even in this short space of time, being replaced by scurfs of thiol, and the skin below showed nothing but a moderate pigmentation. A result like this appears really marvellous in such a refractory disease as dermatitis herpetiformis. In erythema exudativum multiforme also good results were obtained with the solution, but the thiolum siccum pulveratum seemed preferable, the eruption becoming much paler in three to six days, and soon healing completely. The liquid form again proved more adapted to papular eczema, being especially cleanly in application. On the whole thiol does not soil much, though the ointment form (made of 2 parts of thiol and 20 parts of lard) is not quite so agreeable as the solution. Its great advantage over ichthyol, is however, the absence of all unpleasant odor.—*Med. and Surg. Reporter.*

Puerperal Convulsions.—Dr. Alexander Pilliet (*Nouvelles Arch. d' Obstét*, November, 1890), lays great stress upon the hæmorrhagic foci which are found in the livers of women after death from puerperal eclampsia. He implies that the hepatic lesion is primary, and that this pathological discovery must modify our opinions and our treatment of one of the gravest complications of childbed. Twelve necropsies have been made by this obstetrician, and in all the characteristic changes in the livers were detected. This series does not include any case of cholemic eclampsia or hepatic anæmia of pregnancy and the puerperium ; and in the twelve, icterus, where it occurred, was slight, and appeared after the other distinct symptoms. The hæmorrhagic focus in the tissue of the liver is no mere product of simple engorgement of a vessel followed by rupture. It is associated with complicated local pathological changes, minutely described by Dr. Pilliet. In certain respects these foci resemble similar appearances observed in the kidney in scarlatinal and erysipelatous nephritis. The most careful search, however, has failed to detect any bacteria in the foci in Dr. Pilliet's twelve cases. He maintains that since a distinct and severe lesion of the liver was found in every one of the twelve cases of death from puerperal convulsions, it is reasonable to suppose that the lesion is pathognomonic of the complication in question. Lastly, it must here be noted that in the cases in Dr. Pilliet's series where the condition of the kidney is recorded, that organ is described as though not in a perfectly normal condition. He also detected pulmonary and cerebral hæmorrhages in more than one of the twelve necropsies.—*Supp. Brit. Med. Jour.*

Another Good Thing.—Instead of using the curette to scrape away vegetations from the cavity of the womb—endometrium—as is recommended by authorities in gynæcology, I advise injecting the uterine cavity with a mild escharotic, such as the following :

℞.—Glycerine,

Ext. hamamelis	āā f ʒ ij.
Pulv. salicylic acid	gr. xx.
Chloride of zinc	gr. x.

M. Sig.—Use a fluid drachm in a fluid ounce of warm water, with a long-nozzled syringe. Inject to the inmost recesses of the womb's cavity, fearing no evil. Repeat this operation every three or four days.

The oozing, bleeding and enfeebling discharges will soon cease, and all discomfort pass away. The curette does not reach all dentritic growths, and those left soon extend to the fresh field. I know by experience what I am talking about. I have cured cases in a few weeks that had been curetted every week for months together. The curette improves a case, but does not cure it. No danger of having the escharotic enema go through salpingian canals to peritoneum. That bugbear has been exploded by experience; but a cold douche of the endometrium will excite uterine colic in occasional instances.

Besides using the mild injection, give viburnum prunifolium internally. Under this treatment the patient will recuperate rapidly.—*Eclectic Med. Jour.*

Novel Surgical Treatment of Exophthalmic Goitre.—Dr. Lencke, of Hamburg, reports two cases of exophthalmic goitre in which surgical treatment of goitre produced "great relief" of symptoms. The first patient was a lad of seventeen, who had the classical symptoms of the disease—rapid heart, palpitation, prominence of the eyes, and goitre. He came under treatment on account of a sudden access of the swelling, which by the pressure it exerted produced great distress with extreme cyanosis. The heart was rapid and irregular, no rest or sleep could be obtained, and the patient was in imminent danger of asphyxia. Tracheotomy was performed, and a week later one-half of the tumor was extirpated. The operation was accompanied by much hæmorrhage, which, however, stopped spontaneously, and recovery was uninterrupted. The symptoms rapidly vanished, the exophthalmos disappearing, and the heart becoming quiet and regular in action. The improvement was maintained until the time at which the paper was written.

The second case was that of an older patient, and was attended with similar results.—*Med. Rec*

THE TRUE POSITION OF ELECTRICITY AS A THERAPEUTIC AGENT IN MEDICINE.—The *Boston Medical and Surgical Journal* (October 2nd, 1890) contains Dr. Morton Prince's views upon this subject. Electricity is a most valuable aid to the diagnosis of certain forms of disease. To test electrical reactions requires great care and no little technical skill. Proper apparatus is indispensable. As a palliative for neuralgia, nothing can be more valuable than electricity, particularly galvanism. This is also true of acute and subacute neuritis. The atrophy and paralysis following anterior polio-myelitis, in joint lesions and disuse, in hemiplegia following cerebral hæmorrhage, in diphtheritic and pressure paralyses, in hysteria, muscular rheumatism, articular rheumatism, painful neuroses, it is palliative and sometimes curative.

In neurasthenia it acts as a tonic, relieves nervousness and dispels insomnia, but is in no sense a cure. Conditions following grippe yield to it in a remarkable manner; and in psychoses and neuroses, symptoms disappear like magic, the insomnia often disappearing at once. Electricity is not of the slightest use in curing such diseases as locomotor ataxia, disseminated sclerosis, progressive muscular atrophy of the spinal type, myelitis or general paralysis. Whoever hopes to cure epilepsy and migraine by electricity is doomed to disappointment. Faradism probably works, first, by reflex action through the sensory nerves, inhibiting the pathological process in the nerve centres, upon which the local process probably depends; and, secondly, by direct stimulation of nerves and muscles. It is by reflex action, probably, that pain is inhibited. Galvanism probably acts in the same way, and possibly produces local chemical and physical changes which aid in its therapeutic effects. It is claimed for galvanism that it is electrolytic. In many cases the relief obtained from the electric current is largely through *suggestion*, especially in psychoses and neuroses and in those affections where pain plays an important part. —*Jour. Nervous and Mental Diseases.*

UNCONSCIOUS PARTURITION IN A PRIMIPARA.—A case of high obstetric and medicolegal interest is to be found in the *Archives de Tocologie* for November. Physiologically painless parturition is rare. Tarnier has related some cases, including one instance where a Canadian woman occasionally dropped a baby on the ground, at term without noticing it. In Howard's case labor took two hours; the patient was reading a book till a quarter of an hour before the child was delivered, which event occurred after some straining, not sufficient to make her cry out. In Dr. Brunon's case, newly reported, a married woman, aged twenty-two, had a troublesome cough one day shortly before term. The coughing was accompanied with lumbar pains, which increased. At eleven o'clock in the evening the patient tried to pass a motion. She sat over one hour in the closet, believing that her pains signified painful defecation. Then she went to bed. At half-past one o'clock she work up feeling a desire to pass a motion, with lumbar pains such has she had felt before when constipated. As she rose to go to stool a smart lumbar pain occurred, and she felt something between her thighs. On handling it she found, much to her surprise, that it was the head of her first-born. She declared to Dr. Brunon that the pains were entirely lumbar, she had no colicky sensations, and none of the expulsive pains usually so severe, especially in primiparæ. The desire to defecate was strong, and she stated that the child might have been born into the pan of the closet without her recognizing the truth of her condition till the moment of its delivery. The patient was an intelligent well-educated woman, free from any neurosis. This case proves that in the case of an inexperienced person an infant might be expelled into the water in the pan of a closet without any intention of infanticide on the part of the mother.—*Brit. Med. Jour.*

HOW TO WASH OUT A BABY'S STOMACH.—Dr. Siebert (*Dix. Doctor*) gives the following directions for performing this little operation: A No. 10A soft catheter is attached to a glass tube six inches long, the operator is seated before the child, which is held upright (as in throat inspection), or on one side when collapsed; the left index finger of the operator is held between the right upper and lower maxille so as to prevent the mouth from closing. Then the tube is passed over the tongue into the pharynx, the head of the child inclining slightly forwards. By gentle pressure, we overcome the spasmodic contraction of the upper pharyngeal muscles, and then the catheter glides easily into the stomach. Now, the left hand holds the catheter, and the right attaches the lower end of the tubing of the fountain syringe or regular irrigator over the glass tube attached to the catheter. Water is now allowed to flow, and after the stomach is filled the supply is shut off, the tube detached, and the end of the glass tube lowered below the child's umbilicus, so the contents come away very nicely. Never use force. No trained assistant is necessary. The tube will never enter the larynx. The younger the babe, the easier it is to wash out its stomach.—*Med. Brief.*

BAD BREATH.—Dr. Frank H. Gardner gives the causes of bad breath as follows:—First, decaying particles in the mouth as far back as the pharynx vault taint the breath, if exhaled, very little if at all. Second, mouth-breathers have a bad breath when the tonsils are enlarged, or when cheesy masses exist in the tonsillary mucous folds. Third, certain gastric derangements taint the

breath only when gases are eructated through the mouth. Fourth, the principal cause of bad breath is decomposition in the intestinal canal, the retention of fecal matter in the transverse and descending colon, and the absorption of gases into the circulation, finally exhaled by the lungs. Fifth, catarrh—nasal, pharyngeal, or bronchial—causes bad breath. Sixth, medicines or ailments which undergo chemical changes below the œsophagus may, by rapid absorption through the stomach walls, or immediately below, give to the breath the characteristic odor. Bad breath is often a source of serious annoyance to the patient, and the fact that it has more than a local cause is too often ignored by the physician, who therefore fails to cure it.—*Dental Review.*

SPLINTS.—The following recipe is a capital one for manufacturing splints out of old cloth, which answers all the purposes of felt.

Dissolve one pound of the best gum shellac in one and one-half pints of 95 per cent. alcohol, adding one drachm of borax. This makes a syrup-like solution, which is painted over one side of *woollen* cloth, with a new brush, and the cloth is thoroughly dried before the fire. When dry, a second coat is added; dry again, making a thin piece, which can be strengthened by placing another piece over it, with the prepared surfaces together, when they can be united by pressing with a hot iron.

Pieces of old cloth are better than new cloth, as they absorb more. When ready to apply, hold before the fire or in hot water, till soft, then mould to the part, remove for a few moments until hardened; this can be expedited by immersing in cold water.—*North Amer. Practitioner.*

AN EARLY ATAXIC SIGN.—Weiss, of Vienna, says that an early symptom of locomotor ataxia is an inability on the part of the patient to walk backward, while as yet, and in other ways, he may be able to walk with firmness and rapidity. Perron, of Bordeaux, has also, as we stated several weeks ago, recently suggested an early diagnostic sign, which is simply a modification of the Romberg test—namely, causing the suspected ataxic patient to stand upon one leg, instead of two, with the eyes closed. If the patient shows a tendency to fall, it may be inferred that the spinal trouble has begun which will lead on to locomotor ataxia, even if the Romberg test fails, as it not infrequently does in cases that are not well advanced.—*N. Y. Med. Jour.*

MILK DIET IN TYPHOID FEVER.—Prof. Da Costa thinks that the exclusive use of a "milk diet" in typhoid fever is overdone. The stools should be carefully watched to see that the milk does not disagree. His plan is to use three pints of milk and one pint of broth in the twenty-four hours, given alternately, with a mid-day meal of arrow-root, or other thickened food. It should be given every two hours during the day, and every three hours at night. In very light cases it may be given every four hours at night, but under no circumstances should nourishment be used less frequently.—*College and Clinical Record.*

A PLEA FOR CIRCUMCISION.—It is surely not needful to seek any recondite motive for the origin of the practice of circumcision. No one who has seen the superior cleanliness of a Hebrew penis can have avoided a very strong impression in favor of the removal of the fore-skin. It constitutes a harbor for filth, and is a constant source of irritation. It conduces to masturbation, and adds to the difficulties of sexual continence. It increases the risk of syphilis in early life, and of cancer in the aged. I have never seen cancer of the penis in a Jew, and chancres are rare.—Jonathan Hutchinson, in *Archives of Surgery.*

Up to two years ago, the buildings of the Johns Hopkins Hospital cost about two million dollars.

MODERN MEDICINE.

First they pumped him full of virus from some mediocre cow,
Lest the small-pox might assail him, and leave pit-marks on his brow;
Then one day a bull-dog bit him—he was gunning down at Quogue—
And they filled his veins in Paris with an extract of mad-dog;
Then he caught tuberculosis, so they took him to Berlin,
And injected half a gallon of bacilli into him;
Well, his friends were all delighted at the quickness of the cure,
Till he caught the typhoid fever, and speedy death was sure;
Then the doctors with some sewage did inoculate a hen,
And injected half its gastric juice into his abdomen;
But as soon as he recovered, as of course he had to do,
There came along a rattlesnake and bit his thumb in two;
Once again his veins were opened to receive about a gill
Of some serpentine solution with the venom in it still;
To prepare him for a voyage in an Asiatic sea.
New blood was pumped into him from a lep'rous old Chinee;
Soon his appetite had vanished, and he could not eat at all,
So the virus of dyspepsia was injected in the fall;
But his blood was so diluted by the remedies he'd taken,
One day he laid him down and died, and never did awaken;
With the Brown-Séquard elixir though they tried resuscitation,
He never showed a symptom of reviving animation;
Yet his doctor still could save him (he persistently maintains),
If he only could inject a little life into his veins.

—*Puck.*

THE CANADA LANCET.

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The LANCET has the Largest Circulation of any Medical Journal in Canada.

EHRLICH'S TYPHOID FEVER TEST.

In our last number we gave in brief, in an editorial note, this test. By the kindness of Dr. L. F. Barker, one of the House Surgeons at the Toronto General Hospital, we have a more extended notice of the test, with remarks upon the difficulties and errors likely to arise in its application. The importance of thoroughness, and a complete understanding of the reactions occurring, will be obvious to all who wish to use the test, and, judging from our own experience of the difficulty of making an early diagnosis of typhoid, the number should be large. The sulphanilic acid is not, at the time of writing, in stock in Toronto, but by the time of publication of this issue, will be obtainable from Lyman Bros. & Co. here, who have kindly ordered the reagent from New York. The solutions used are: (1) R. Acid hydrochlor. pur. 1; aquæ destillatæ, 20; acid sulphanilic, q.s., to saturate. (2) A ½% solution of sodium *nitrite*, $NaNo.^2$. (3) Ordinary liquor ammonia.

The reagent which Ehrlich wished to use was diazo-benzene sulphonic acid. This body is not stable, so he prepares it by mixing solutions No. 1 and No. 2. The hydrochloric acid acts on the nitrite of sodium, setting free nitrous acid $H\,NO^2$ and sodium chloride. $H\,Cl + Na\,10^2 = H\,NO^2 + Na\,Cl$. Now, sulphanilic acid (which is para-amido-benzene sulphonic acid) is converted by nitrous acid into diazo-benzene sulphonic acid. Thus:—

$$C^6\,H^7\begin{matrix}NH^2\\SO^2OH\end{matrix} + H\,NO.^2$$

Sulphanilic acid, Nitrous acid.

$$= C^6\,H^4\begin{matrix}SO^3\\N=N\end{matrix} + 2H^2\,C^1$$

Diazo-benzene sulphonic acid.

This diazo-benzene sulphonic acid unites with some unknown substance in typhoid urine and the compound thus formed on the addition of liquor ammonia becomes a beautiful garnet-red or carmine color, the nature of which is also unknown. If allowed to stand, this red body becomes precipitated and slowly changes to a dark green substance.

In making the test, ten parts of solution No. 2, are mixed with 400 parts of solution No. 1, and well shaken. Take equal parts of this mixture and the suspected urine, shake well, add excess of liquor ammonia and if the "typhoid diazo-reaction" be present, a deep carmine or garnet color results, which, on shaking, yields a reddish foam. This latter is important, as very many specimens of urine, even from healthy individuals will give a red-color which, on shaking does not, however, yield a red foam. Again, febrile urines will give the red-color and on shaking will give an *orange-colored* foam, but this after a little experience is readily distinguishable from the "*reddish* foam" of the typhoid test.

In order to obviate the difficulty of distinguishing the red-color which appears in febrile urines from the genuine reaction, Ehrlich advises dilution of the urine with 5 or 6 vols. of absolute alcohol and subsequent filtration. Then mixture with test-solution and addition of ammonia. Where any doubt exists this is a valuable alteration in the test, but absolute alcohol is expensive, the process is a lengthy one, and with attention to the details mentioned above, in regard to the original test, one will scarcely ever be misled. Dr. C. E. Simon, of Johns Hopkins Hospital, recommends what he calls the "ring-method." He mixes equal parts of test-solution and urine, and allows about one drachm of liq. ammonia to trickle down from a pipette on to the surface of the mixed liquids. A dark garnet at point of juncture is supposed to indicate the reaction. This method is in our experience altogether unreliable, as it would seem impossible to distinguish the color produced by typhoid urine from that of other urines.

The advantages of the test are that typhoid can be diagnosed before the appearance of the spots. The results are most brilliant from the 3rd to the 12th day of the disease.

Again, in doubtful cases and cases with complications, the application of the test will sometimes clear up the diagnosis at once.

Unfortunately as a drawback, Ehrlich has found the reaction *rarely* present in certain other diseases, especially those accompanied by rigors, as pyæmia, ulcerative endocarditis, and severe malaria. Simon also claims to have found the reaction once or twice in cases of pulmonary tuberculosis. In the Toronto General Hospital the urine in 17 tubercular cases has been tested without obtaining the *genuine* diazo-reaction in any case. A research on this is now being carried out and will be reported later.

ONTARIO MEDICAL ASSOCIATION.

The eleventh meeting of our Provincial Medical Association will soon be held in this city, and we hope that the members will not only turn out in large numbers, but that the character of the papers presented by them will reach an excellency never before attained. It is encouraging to note that the attendance has almost doubled since the Association held its inaugural meeting in 1881; but when we consider that there are over 2,500 practitioners in the Province, and over 300 in Toronto, an attendance of 245 seems small indeed. Is it possible that only one in ten of the profession is sufficiently anxious to keep abreast of the times, to make it worth his while to attend this annual gathering for scientific purposes? The interest manifested in the Medical Society must be held to be the index of the interest taken by the physician in the science of his profession, apart from its dollar and cents aspect. It is the Medical Society, or Association, or Congress, that stimulates the zeal of the general or special practitioner to keep records and histories, to group his cases and draw conclusions for after use. The time and money spent in attending the Association meetings is repaid a thousandfold by the good derived.

The Association this year will be favored with papers of unusual interest from some of its members. As will be seen in another column, the discussions in medicine, surgery, gynæcology, and otology, have already been arranged, and not only do the subjects chosen appear practical and useful to the general practitioner, but the leaders in these discussions are all men to whose opinions the Association will be glad to listen. In addition to these, Dr. N. Senn, the widely-known Milwaukee surgeon, has promised to contribute a paper upon the Surgical Treatment of Intussusseption. This will afford an opportunity to meet and listen to a gentleman known to many already by his able writings.

Dr. Howard Kelly, of Johns Hopkins University, will read a paper entitled "Gynæcology for the general practitioner," which can hardly fail to be of great practical interest to many of our members. We are informed, moreover, that it is expected one of the leading authorities in medicine from the other side of the line, will lend further interest to the meeting. A considerable list of good papers is already in the hands of the Committee on Papers, and altogether we feel sure that under the presidency of Dr. Moorehouse, the Association is about to see one of its most successful gatherings.

THE ARREST OF HÆMORRHAGE BY TORSION.

While among the rank and file of the profession, torsion is not looked upon as so safe a method for the arrest of hæmorrhage as is ligature, yet the former method seems to be increasing in favor among many of the abler surgeons of the day. It has many enthusiastic advocates in Philadelphia and elsewhere. Mr. Bryant, of London, has also employed torsion on the larger arteries a great many times, and claims for it better success than with a ligature. The advantages claimed for torsion by Dr. J. B. Murdock, as compared with ligation, are as follows:

1. The greater facility with which it can be applied. I am fully aware that this proposition is disputed, but to those who are familiar with both methods, there can be no doubt that torsion is the easier of the two. For the ligation of an artery, an assistant is required to seize the vessel and draw it out while the ligature is applied. For torsion, the surgeon requires no assistant. The vessel must be seized by the forceps in either case. In torsion it only requires three or four turns of the forceps

to complete the process, which can be accomplished in as many seconds. When a ligature is applied, let the operator be ever so skilful, the thread may break or slip off the vessel, but if neither of these accidents occur, the process cannot be accomplished in anything like the same time.

2. Torsion is a safer method, being less liable to be followed by secondary hæmorrhage.—This proposition has been absolutely proven by the experience in the use of torsion at Guy's Hospital, London, and my own experience is additional proof.

3. Healing is facilitated because the wound is free from any irritating or foreign body. This proposition is so plain that it should not require argument. It was true before the antiseptic treatment of wounds had come into such general use, but it is doubly so now. The catgut ligature is no doubt a safer ligature than the silk, for it does not require an ulcerative process for its discharge, and when this ligature has been made thoroughly aseptic it is no doubt the best. But a ligature rendered thoroughly aseptic is not always at hand, and those surgeons who have had most experience with the antiseptic treatment of wounds will, I think, be the first to admit that, in spite of their most careful attention, septic germs are often introduced into the wounds by means of the ligature. Even after every precaution in preparation and preservation, the handling of a ligature in its application is a frequent source of infection."

MEDICAL AND SURGICAL BRIEFS.

FROM NEW YORK HOSPITALS.

THIERSIE'S METHOD OF SKIN GRAFTING.—As a general rule antiseptics are not used in the operation of skin grafting. The patient having been etherized and the skin rendered aseptic, that portion of the body to be dermatized may be freshened by means of a scalpel. Two retractors (made for the purpose) placed at a suitable distance and held by an assistant, make the skin tense so that the operator with a sharp razor may remove the cuticle from the healthy skin. A few drops of a ¾ % solution of common salt is now to be placed on the denuded skin which lies on the razor in a corrugated mass. The razor is reversed and drawn backward over the wound, while the graft is gently teased into its place. A rubber protective gauze soaked in the salt solution, cotton wool and bandage form the after dressing. The graft requires repeated moistening in the salt solution, necessitating frequent disturbance of the dressing, generally about every three hours. To avoid this it has been proposed to substitute a weak antiseptic fluid for the salt solution. Several successful operations have been performed where bichloride, 1 in 10,000, was used, the dressing not being disturbed for forty-eight hours. In this way, strips of cuticle are applied sometimes as long as three inches by one and one-half wide. So far as I can learn, the above represents fairly the methods adopted in the various New York hospitals.

APPROXIMATION PLATES.—For various lesions of the bowel, such as stricture, gangrenous strangulation, rupture, traumatism, etc., it is important to consider the best means of suturing the intestine. The operation is rendered tolerably safe by means of Dr. Senn's plates, or by a modification of them, the gut rings devised by Dr. Abbe. It is difficult to obtain the bone plates, and as it requires several days for their preparation much inconvenience might arise if one had to depend on them alone. They are made of bone, perforated because the fæces will have to pass through them, and decalcified by maceration in a 10 % solution of hydrochloric acid. They require two or three days for maceration and several days for drying. To remove the difficulty of obtaining the plates, it has been proposed that catgut rings be substituted. They are made of heaviest catgut softened in hot water till they cease to twist. Then a single strand is wound closely on four strands to form a ring. Four or more threads are fastened to the plates or rings at regular intervals, having the needles attached. The ring is placed in the intestine, while the threads are brought out through the gut wall. Two of these rings are required, one in each aperture, so that when drawn together by the threads the approximation of the peritoneal coat will be complete. The union may be rendered more secure if need be by a few Lambert sutures. These may be used in the operations of circular enterorraphy, intestinal anastomosis and in the construction of artificial ani. The success of the operation depends entirely on the approximation of the peritoneal surfaces. A great number of experiments of this kind have been tried on animals with almost complete

success. Several successful operations on the human subject are also reported.

RADICAL CURE FOR HERNIA, AT ROOSEVELT HOSPITAL.—This is quite an ordinary operation here. Two principal results are aimed at, first, to secure the sac and ligate it at the internal abdominal rings; and, second, to prevent primary union in the wound, in order to get cicatricial tissue to strengthen the abdominal wall, for it is claimed that with primary union the hernia is very apt to recur. The incision is made just above the inguinal canal, from the internal abdominal ring as far as necessary, which is sometimes to the middle of the scrotum. All structures are divided down to the sac, which is exposed, and completely separated up to the internal ring. The next step is to ligate it. The ligature should go as far into the abdominal cavity as possible. For this purpose the operator puts his finger into the sac and prevents the gut from coming down, and at the same time aids by allowing the ligature to roll off his finger, in getting it up well up on the sac. Before the wound is closed the skin and deeper tissues are united by a row of sutures passing completely round it. The scrotal part of the incision is sewed up closely; the remainder is only partially closed, a space about one-eighth inch wide being left between the lips of the wound. Silver sutures, three or four in number, with leaden buttons and perforated shot are now passed deeply to approximate the remaining part of the opening. The space between the edges of the wound is packed with iodoform gauze down to its bottom. The object of this is to prevent primary union, and so promote the formation of granulation tissue. Iodoform iodoform gauze, bichloride gauze, cotton wool and bandages complete the dressing, which is undisturbed for a week.

STOMACH WASHING IN INFANTS.—For some time past this method of treatment of gastro-intestinal diseases in infants has been largely experimented upon, and adopted by some of the leading practitioners of France and Germany. Not a few of the most successful physicians here are warm in its support, and some of those who at its inception opposed it, are now its exponents. It is applicable to all gastro-intestinal disorders—save typhoid—including infantile dyspepsia, cholera infantum and chronic diarrhœa. It is a simple and harmless measure. A funnel or fountain (graduated) attached to a soft catheter by means of rubber tubing, constitutes the complete apparatus. It is generally believed that antiseptics are useless, and so only warm water is used. It will be readily seen that if the funnel, filled with water, be raised higher than the stomach, the water will flow into it. So by lowering it the tubing is converted into a syphon, capable of withdrawing the fluid. The catheter can only pass into the œsophagus, and should be passed rapidly at first until gripped by the upper œsophageal muscles, which soon relax, after which slight pressure at once places the instrument. Irrigation of the colon is also employed, and would undoubtedly be useful where the morbid condition is in the lower bowel.

INFANTILE DIARRHŒA (*Polyclinic*).—Diarrhœa occurring in infancy is believed to be due to germs of decomposition in the intestinal tract. Antiseptics may not be used of sufficient strength to arrest the process, and are therefore discarded. All kinds of food, and especially those which have been most used by the child are prohibited for one or two days. During this time barley gruel is given, simply to occupy the attention of the digestive organs. The child may drink black tea sweetened with sugar or glycerine. Washing out of the colon is considered imperative. If vomiting be associated, the stomach is washed out with tepid water, and calomel given to clear out the upper bowel. Chronic diarrhœa also yields to this treatment.—J. F. B. R.

ONTARIO MEDICAL ASSOCIATION.

The discussions by special committees have been arranged as follows:

Medicine — Chairman, Dr. A. McPhedran, Toronto; Dr. Mullin, Hamilton; Dr. Henderson, Kingston; Dr. Gillies, Teeswater. Subject: "The Cardiac Complications of Rheumatism."

Gynæcology—Chairman, Dr. Eccles, London; Dr. A. A. Macdonald, Toronto; Dr. K. N. Fenwick, Kingston; Dr. Mathieson, St. Marys. Subject: "Treatment of Fibroid Tumors of the Uterus."

Surgery—Chairman, Dr. Teskey, Toronto; Dr. Wishart, London, Dr. Groves, Fergus. Subject: "The Cause and Treatment of Carcinoma."

Otology—Chairman, Dr. R. A. Reeves, Toronto; Dr. Osborne, Hamilton; Dr. Hodge, London.

Therapeutics—Dr. Saunders, Kingston.

The Chairmen of the standing committees are: *Credentials*—Dr. Anglin, Kingston; *Public Health*—Dr. Kitchen, St. George; *Legislation*—Dr. W. B. Geikie, Toronto; *Publication*—Dr. W. P. Caven, Toronto; *By-laws*—Dr. P. Brown, Toronto; *Ethics*—Dr. Tucker, Orono.

The remaining temporary committees have been appointed by the President as follows:

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Advisory—Chairman, Dr. Henderson, Kingston; Dr. Gibson, Belleville; Dr. W. T. Aikins, Toronto; Dr. Lesslie, Hamilton; Dr. Lundy, Preston; Dr. Burt, Paris.

INOCULATIVE TREATMENT OF TUBERCULOSIS.

The Koch treatment still continues to be a matter of interest and speculation among the members of the medical profession throughout the world. The enthusiastic assurances of success, made rather upon a knowledge of the discoverer of the remedy than upon the results of its use, have, in a measure, abated, and all are waiting for tabulated results to pronounce the success or failure of the remedy. It would at present be unwise to hazard an opinion upon the matter, but the reports of relapses in some of the cases of lupus are somewhat discouraging, and in the cases of pulmonary tuberculosis, the time elapsed has not yet been sufficient to state anything definite. It may reasonably be inferred that inasmuch as the remedy is an extract of the tubercle bacillus, its injection in large and repeated doses would, in certain cases, induce acute miliary tuberculosis. It has been asserted that in the event of failure of the treatment the idea of treating disease by inoculation of the products of bacteria is a valuable suggestion to the practical therapeutist. But this is in no sense a new idea, for in the *London Medical Times and Gazette*, of March 14th, 1863, Sir James A. Grant, of Ottawa, showed the possibility of *vaccination* proving curative in many forms of contagious affections, and his communication of that date forms a very interesting item in the light of the discoveries of Dr. Koch.

TREATMENT OF GASTRIC ULCER BY RECTAL FEEDING.—In an article by Dr. Donkin *(Lancet)* his method of healing gastric ulcer is commended after large experience. The stomach should be kept free from all labor of digestion, which should be transferred to the colon. When the diagnosis is certain and hæmatemesis not of long standing, begin with small injections of milk and beef tea at short intervals; while in uncertain cases pain after eating should lead to this treatment. A comparison of the enema treatment with that per os demonstrates the inferiority of the latter.

Many cases of so-called chronic dyspepsia were successfully treated in this manner. Ten cases are related, some treated by milk and beef tea, others by peptonized fluid enemata, or suppositories, with like success in all. All cases became emaciated, but soon regained the loss. It is possible that water alone is the efficacious agent, although he has never used water injections alone. At any rate, it is still doubtful if albuminous substances are assimilated in the colon, and it is an established fact that life may be preserved for many days by the exclusive use of water. Absolute rest is demanded, and for this reason it would be injurious to ascertain, by weighing, the value of various enemata. Injection will not disturb if not too large; 2 to 3 grammes should suffice at intervals suited to the case. Irritation of the intestine is treated by thorough irrigation. As soon as solid food can be retained, arsenic and iron improves nutrition.

CHLOROSIS AND ITS TREATMENT.—Dr. Frederick Scholz of Bremen, says *The Lancet*, has published a remarkable work on chlorosis, the outcome of observations made during the last twenty years. Instead of regarding the deficiency of iron or

hæmoglobin, or even that of the red corpuscles, as the primary affection, he states that contraction of the vessels is always present in these cases, as indeed was observed by Bamberger, Rokitansky, and Virchow; and this, he contends, is not to be regarded as a complication due to an altered condition of the blood, but as the primary condition which is followed by the morbid change in the blood. As a matter of fact, the vessels are, he says, too full, or in the condition termed by the older physicians "plethora ad vasa," the blood being—or becoming—abnormally serous. Long ago his attention was struck by the cold and livid condition of the skin in anæmic subjects, and he was led by this to employ hot baths, together with gentle friction, in the treatment, with the view of acting directly upon the skin, so as to improve the vitality and nutrition generally. The success of his first attempts was so marked that he was encouraged to persevere in this line of treatment, and he has since had many opportunities of extending his experience with it. Hot baths diminish the plethora by relaxing the tension of the vascular system, which is high, quickening the circulation, and thus relieving the palpitation, dyspnœa, and other symptoms. In thirty cases where the distress of the patient was very great, Dr. Scholz has gone a step further and supplemented the hot bath by venesection. Paradoxical as this treatment may appear, it was followed by marked benefit, and if the theory of the pathology of chlorosis above mentioned be correct, there can be little doubt that the novel line of treatment practised by Dr. Scholz is justifiable.

INDUCTION OF PREMATURE LABOR.—This procedure being often necessary, the following by Dr. Balandin (*Annales de Gynécol.*) will be of interest to our readers. He gave the results of forty-three induced labors, the only assistance in each case being that rendered by an experienced midwife. Strict antiseptic precautions were enforced, and the two methods habitually employed for inducing labor where the introduction of the bougie and puncture of the membranes. As auxiliary measures, electricity and douching were practiced. Injections were thrown up between the uterus and the ovum, either 2 per cent. boric acid solutions being used, or sterilized water at a temperature of of about 100° F. The bougie often acted but slowly after several days or weeks, and sometimes not at all. Its efficacy appeared to diminish with the increase of the antiseptic precautions. But it never set up febrile reaction, or caused any other complications. After punction of the membranes, uterine contractions did not invariably set in. This was mostly the case when the uterus was but slightly excitable, and had relaxed parietes. In one case, intermittent flow of the waters continued for eight days after puncture, without contractions setting in. In an instance of this kind, more radical courses were needed. Dr. Balandin usually dilated the cervix with his finger, turned by the combined external and internal method, drew down a foot, and slowly extracted the fœtus. Not a single mother was lost. No reaction even followed the turning cases. In the last series of twenty cases, nineteen children were saved.

ANOTHER TREATMENT OF ASTHMA.—Says Pearse in *The Practitioner*: There is one other method of treating asthma that is not, I think, regularly practiced, but to which I wish more particularly to draw attention. A person liable to attacks of asthma should be classed with those persons who have fits of epilepsy, and with those who suffer occasionally from "sick-headaches." By this I mean that all these patients have unstable nerve-centers, liable to explode their energies at any moment and exhibit the pathological phenomena peculiar to nerve-storms. Our treatment here should, I think, be an endeavor to break the habit morbidly acquired by the nerve-centers, and by regular prolonged medication to maintain the centers in a state of more stable equilibrium. This is done very successfully in the majority of cases of epilepsy, and I have applied the same principle with success in cases of severe migraine and asthma. In these cases I give chloral and belladonna night and morning, or every night at bed-time, and I have found the attacks not only lessened in frequency, but also considerably diminished in severity.

SAYS Morell Mackenzie: I believe that Koch's fluid is an agent of the highest possible value for the *detection* of tubercle, a remedy of great potency for certain of the slighter manifestations of tuberculosis, a palliative for some of the distressing symptoms of the severer forms of the disease, and

a deadly poison in advanced or unsuitable cases. Probably when more is known as to its mode of action, it will be possible to do more good by its means, with less risk of harm, than is the case at present. A wider sphere of usefulness will, no doubt, be opened up to it when practitioners have learnt how to combine other methods of treatment with it to the best advantage.

DR. TEMPLE'S PRIVATE HOSPITAL, BELLEVUE HOUSE.—We are pleased to notice the opening of Dr. Temple's new hospital at No. 87 Bellevue Avenue, Toronto. In February, 1889, Dr. T. made a new departure in the City of Toronto, in opening a private hospital for the treatment of diseases of women, and so great has been his success, that it has been found necessary for him to build the present new and commodious hospital at the above address. We are able, from a personal inspection, to say it is one of the best equipped, and most comfortable institutions of the kind to be found on this continent. The sanitary arrangements are of the most modern and approved character, whilst the wards have been arranged with the view of affording as much as possible, the comforts of a home. The head nurse, Mrs. Barton, so favorably known whilst chief nurse of the obstetrical department of Toronto General Hospital, and also of Dr. Thomas' Hospital, New York, is a sufficient guarantee of everything being done for the patients which careful and skilful nursing can do. The operating rooms are well lighted and fitted with beds, so that in serious cases patients need not be moved immediately after operation. The entire establishment is under the personal management and control of Dr. Temple, who, with his staff of trained assistants, attends in every case. Dr. Temple's reputation is so well known, that comment is unnecessary. We regard this institution as particularly well equipped, and it cannot but serve as a boon to the many suffering women of the Dominion of Canada.

SHALL THERE BE COMMERCIAL UNION WITH CANADA OR NOT?—*Public Opinion*, the eclectic weekly of Washington and New York, has just announced the offer of three cash prizes of $150, $100, and $50 respectively for the best three essays upon the question: "Is any extension and development of trade between the United States and Canada desirable; if so, what are the best means of promoting it?" The topic is particularly timely and the contest will doubtless attract considerable attention.

Full particulars may be had by addressing the publishers of *Public Opinion* at either New York or Washington.

MIXTURE FOR NEURALGIC HEADACHE.—The late Dr. George M. Beard, says the *St. Louis Med. and Surg. Jour.*, devised a mixture which he employed successfully in headaches of all kinds, and which has lately received the endorsement of Dr. E. P. Hurd, in his monograph on neuralgia. The prescription is as follows:—

℞.—Caffeini citrate
Ammonii carb. . . . . aa ℈ j.
Elixir guaranæ . . . . . ʒ j.—M.

Sig.—A tablespoonful every hour till the pain is relieved.

The continuous use of the drug does not seem to produce any harm.

NASO-PHARYNGEAL CATARRH is thus treated by Willis: First cleanse parts with peroxide of hydrogen, diluted sufficiently, and then apply the following with spray:

℞.—Sodii boro-benzŏat,
Fld. Ext. hydrastis. . . . .āā ʒ j.
Glycerini. . . . . ℥ j.
Acid. carbolici. . . . . ♏ xx.
Aquæ camph. . . . . ʒ vj.
Aquæ. . . . . ʒ vj.

M.—Sig. Use three times per day.

TREATMENT OF JAUNDICE.—Dr. L. E. Samuel says: I have tried many things for the relief of functional jaundice; many drugs highly lauded by "authorities" have in my hands proved of no value; others have seemed to arrest the progress of the trouble and to aid in slow return to health. The most efficient combination I ever found is as follows:

℞.—Sodii phosphatis. . . . . ʒ ij.
Aquæ pur. . . . . fl ʒ j.
M. et ft. solut. et adde:
Tinct. nucis vomicæ. . . . . fl ʒ ij.
Tinct. gentian, ad. . . . . fl ʒ iv.

M. Sig.—Teaspoonful three times a day.

This will often give relief where every other

thing has failed to do so. If it prove too laxative a smaller dose may be administered, but under ordinary circumstances the dose here given will be all right. The same formula may be given with advantage in "billiousness," trouble with the duodenum, or even in certain forms of dyspepsia.

THE Paris correspondent of the *Medical Press and Circular* mentions the following application for vegetations of the genital organs :—

R.—Acid. salicylic., ... ʒj.
Acid. acetic., ... ʒj.—M

Touch the excrescences with this liquid morning and evening with a fine brush. In two or three days they will disappear.

TO PRACTITIONERS.—What will successfully remove the discolorations caused by irritable bladders?—A. B.

DR. J. A. SPRAGUE, Stirling, Ont., has received the M.D., C.M., Trinity University, Toronto.

ALEX. M. BLIGH, M.R.C.S., Eng., etc., Liverpool, England, says: S. H. Kennedy's Extract of Pinus Canadenses is an invaluable remedy for most diseases of the mucous surfaces, especially of the throat, and indeed the whole intestinal mucous membrane. In throat affections, relaxed uvula, chronic laryngitis, assuming the form of aphonia clericorium, to which teachers, singers, and clergymen are subject, I have found its administration, both internally and as a gargle, most useful. I have considerable experience of its efficacy in clergymen, and find it invaluable in neurosis of larynx.

Books and Pamphlets.

THE GENERAL PRACTICTIONER by Theodore Strehz, M. D., Chicago, Ill.

This manual for the practice of medicine, is neatly gotten up, and published in three small volumes. The first volume contains a valuable collection of selected prescriptions with carefully arranged rules as to the manner of their exhibition. The other two volumes deal with the various diseases, taking them up in an aphabetical manner, giving definitions, causes, symptoms and treatment. The busy practictioner should find this a work of easy and rapid reference as well as a reliable comprehensive, and condensed view of medicine.

We apologize for these advertisements appearing in this column. As the copy did not come in till we had gone to press with the advertising pages, to save disappointment to our patrons, we encroach on the last column of reading matter.

CHICAGO POLICLINIC.

The Third Semi-Annual **Special Course** for Practitioners, will begin March 30, 1891, and continue two weeks. This course will include :

1.– Surgery of the Brain and Spine, . . Prof. C. Fenger.
Surgery of the Thorax and Stomach, Prof. N. Senn.
Surgery of the Abdomen, Including Abdominal Tumors, ... Prof. Chas. T. Parkes.
Surgery of the Genito-Urinary Organs, Profs. F. Henrotin and J. H. Etheridge.

All operations demonstrated on dogs and cadavers.

2.—General Clinics in all the Departments of Medicine and Surgery by Members of the Faculty.

3.—Operative Surgery on the Cadaver.

The use of Koch's Lymph in Medical and Surgical Cases will be demonstrated.

Regular Courses continued throughout the year.

For further information address the Corresponding Secretary, M. R. BROWN, M. D.,
174 and 176 Chicago Ave.

ONTARIO
Medical Association

Eleventh Annual Meeting,

JUNE 3rd AND 4th, 1891.

The 11th Annual Meeting of the above Association will be held in the City of Toronto, on Wednesday and Thursday, June 3rd and 4th.

All duly qualified practitioners attending this meeting will obtain return tickets at one and one-third fare.

Gentlemen desirous of reading papers, or of presenting cases before the Association, are to notify the Secretary by the 1st of May at the latest, of the title of such paper or case, for submission to the Committee on Papers and Business.

D. H. MOOREHOUSE, President,
Toronto.

D. H. GIBB WISHART, General Secretary,
47 Grosvenor St., Toronto.

THE CANADA LANCET.

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Original Communications.

THE OPHTHALMOSCOPE IN RELATION TO DISEASES OF THE NERVOUS SYSTEM.*

BY G. STERLING RYERSON, M.D.,C.M.,

Professor of Ophthalmology in Trinity Medical College.

A recent writer[1] has said, "It seems to me the best and most useful feature of ophthalmology that it has closer or more remote relations with every branch of medicine and surgery—indeed with almost every branch of science." With Mr. Tweedy[2] I would emphasize the correspondence between the development and functions of the brain and those of the optic nerve, since these last are genetically direct and early outgrowths of the brain. It is also notable, that the eye and its appendages receive the whole or parts of six, out of the twelve pairs of cranial nerves. These things point to the intimate relationship existing between the eye and the rest of the body. No other organ of the body contains so many different kinds of histological elements or textures of so high a quality as the eye. Hence the immediate participation of the eye in general and constitutional diseases. It is thus seen that there is a histological and physiological relationship between the epiblastic elements of the eye and the epiblastic tissues of the body, and between the meso-blastic elements of the eye and all the other meso-blastic elements.

The pathological relationship is no less intimate and exact; the cutaneous eruptions of strumous children, eczema, etc., are concomitants of the phlyctenulæ of the epithelial layers of the cornea. Syphilis, on the other hand, is a disease of meso-blastic textures, and ocular syphilitic affections are found to be of meso-blastic origin. The defective teeth of hereditary syphilitics are not faults of epi-blastic enamel, but of the meso-blastic dental papillæ. I would also remind you that the optic nerve sheath is directly continuous with and almost identical in structure with the dura mater; whereas the optic nerve and its expansion the retena are direct offshoots from the brain itself, and Schwabe in 1869, showed that the cavity of the sheath was a prolongation of the arachnoid cavity. It is not surprising, therefore, to find that diseases of the brain are generally attended by eye symptoms and with lesions which are recognizable either with the ophthalmoscope or by an examination of the pupil and the extrinsic ocular muscles. These symptoms sometimes precede the general symptoms and become of great diagnostic importance. I would draw attention to the fact, that among the first observers to point out the importance of examining the eye ophthalmoscopically in cases of brain disease or suspected organic disease of the nervous system, was Bouchut, in 1866, who somewhat later suggested and used intubation, since revived by O'Dwyer, of New York. (he was proceeded by Coccins[3]). Like most pioneers in medicine, he fared badly; was refused admission to the Academy of Paris and was treated with contumely. I had the advantage of attending his lectures at the Paris Sick Children's Hospital, in 1875. He called the ophthalmoscope as applied to diseases of the nervous system—the *cerebroscope*. The writers who have done the best work in medical ophthalmoscopy in England are Hughlings Jackson, Clifford Allbutt, and Stephen Mackenzie. Ophthalmoscopic examination in nervous diseases has become so established a custom that no neurologist would consider his examination of a case complete without an examination of the eyes.

I will briefly pass in review a few of the diseases of the brain in which the ophthalmoscope may be of especial use in diagnosis. Miliary aneurism of the brain is by no means easy of diagnosis. Yet a series of cases have been reported in which these aneurisms were also found in the retina, and were confirmed by Lionville[4] at the *post mortem*. But

*Read before Ontario Medical Association, June, 1890.

1. Dr. Jas. Anderson, *Ophthalmic Review*, April, 1889.

2. Bulletin de la Société Anatomique (*Annual Univ. of Science*).

3. Anwendung des Augenspiegels, 1852.

4. Graefe u. Sæmisch, Handbook.

it is more especially in cases of what Jackson calls "coarse" disease, disease with gross macroscopical change in the brain or its membranes, that the ophthalmoscope is most useful; such as tumor of the brain, abcess of the brain, effusion from meningitis and gumma of the brain. In such cases optic neuritis makes its appearance; of the form known as "descending neuritis." In these cases there are often no external signs. The vision may be good and remain so for some time. A case, recorded by Manthner retained good vision until death. Even the pupil is unaffected at first; the ophthalmoscope alone reveals the true state of affairs. We find the optic nerve swollen, œdematous, its borders hazy or lost, the veins enlarged and tortuous, the arteries normal, or small and buried in effusion. It has been proved both practically and experimentally that increase of the intra-cranial pressure will so influence the fluid in the sub-dural and sub-arachnoid spaces as to force it into the vaginal lymph spaces of the optic nerve and cause swelling and inflammation of the connective tissue of the optic nerve, obliteration of the space, and atrophy of the nerve fibres. This is what is known as "Stauung's papilla," or "choked disc." The tables of Edwards and Lawford[1] show that choked disc occurs in 66% of tumor of the brain, and Beonhard statistics show that in 45% of cases of choked disc vision remains intact.

As regards the frequency with which changes are recognizable with the ophthalmoscope. Heinzel[2] has published a series of sixty-three cases of cerebro-spinal meningitis, intra-cranial tumors, tuberculous meningitis and sclerosis of the brain. Among these cases 47 had alterations in the optic disc, and 16 had not. Allbut observed among 38 cases of tubercular meningitis, 29 who had ophthalmoscopic lesions. Annoke[3] and Reich collected 88 cases of intra-cranial growth with ophthalmoscopic examinations and autopsies and found ophthalmic changes in 75 per cent. In cases in which the ophthalmoscopic examination gives negative results limitations of the field of vision may be mapped out by the perimeter and give valuable diagnostic indications

When we remember the direct connection which exists between the eye and the brain through Schwabe's space, it is rather a matter of wonder ment that we do not find cent. per cent of eye lesions to brain lesions, especially in such cases as epidemic cerebro-spinal meningitis. It does not unfrequently happen that we meet not only with neuro-retinitis, but with purulent choroiditis in these cases.

In epilepsy the optic nerve is not usually affected. In the so-called thalamic epilepsy, the "flimmer scotom" of German writers, Forster's amaurosis partialis fugax, the ophthalmoscopic appearances are negative. It happened to me once to be present when a patient of mine was so attacked. I found the optic disc pale and the vessels contracted; there was an irregular pulsation of the veins.

In insanity, atrophy of the optic nerve or neurites opticæ are frequently observed. Allbutt, publishes the following interesting statistics of 43 cases of epilepsy with dementia, 15 had alterations in the optic nerve. Of 51 cases of mania 25 showed ophthalmoscopic changes. In 38 cases of dementia without epilepsy, 23 times were disease of the optic nerve and retina observed. In cases of melancholia the retina is very often anæmic. In paralysis of the insane, of 53 cases only *five* were found in which there were no optico-retinal changes. To recapitulate, diseased fundi to normal, bore the following proportions: — Dementia, 12.6, acute and subacute mania, 14 6, chronic mania, 3.3 melancholia, 1.4, general paralysis, 11.0.

Having thus shown the intricate relationship between disease of the brain and disease of the optic nerve, I invite your attention to the consideration of the connection between diseases of the spinal cord and of the optic nerve.

The title of this paper precludes the consideration of the alterations of the pupil and paralyses of the ocular muscles in spinal disease, but I would draw your attention to the great frequency of atrophy of the optic nerve in tabes dorsalis. Leber[5] of 87 cases of atrophy observed by him, 23 were associated with tabes, this is about 26 per cent. of the cases. Charcot states that the optic nerve trouble often precedes the spinal disease by many years, and that the pain and muscular incoördinance follow. It usually begins with a contraction of the field of vision; of the subjective

1. Trans. of the Soc. of United Kingdom.
2. Jarhbuck für Kinderheit Kunde 1875.
3. Coleman, The Ophthalmoscope in Brain Disease.
4. On the use of the ophthalmoscope, page 364.
5. *Arch. für Ophthal.* XV. 3, p. 33.

symptoms, red and green blindness and photophobia are the most constant. Together with these is a gradual failure of sight. I will conclude with the following interesting table compiled by Cyon[1]; of 203 cases of tabes dorsalis eye affections were present 105 times, thus:

Amblyopia, 33 times; paralysis of eye muscles, 30 times; mydriasis, 3 times; myosis, 9 times; amaurosis and muscular paralysis, 16 times; amaurosis with mydriasis, 8 times; amaurosis and myosis, 1 time; paresis of muscles and mydriasis, 4 times; amaurosis with mydriasis and paralysis of ocular muscles, 2 times.

Of functional diseases of the nervous system, headache is the commonest. It is rarely attended by disease of the optic nerve, but is frequently caused by the errors of refraction, such as long. and short sight, and particularly by astigmation. And also by muscular defects requiring the proper adjustments of prisms for its relief.

From the facts stated in this paper, I would draw the following conclusions:

1. That diseases of the brain and spinal cord are frequently associated with ocular disturbances.

2. That serious eye trouble may be present without subjective symptoms.

3. That eye troubles often precede and give warning of impending nerve disease.

4. That disease of the optic nerve and retina are of great diagnostic value in nervous diseases.

5. That it is the duty of the physician to examine the eye and its muscles in all cases of nervous diseases.

A REVIEW OF THE TREATMENT OF FIBROIDS OF THE UTERUS WITH SOME REMARKS ON DISPLACEMENTS OF THE UTERUS AND SURGICAL MEANS OF CORRECTING THEM*

BY G. S. RENNIE, M.D., L. R. C. P. LOND., HAMILTON.

(Continued from March number)

Removal of the Uterine Appendages is the only other method of surgical treatment. This usually stops menstruation and induces the menopause. The operation does good in two ways: 1st, by checking the hæmorrhage, and, 2nd, by stopping the growth of the tumor.

The mortality for this operation is low, *i.e.*, under 3%, and Tait reports 148 cases without a death, so that this operation, were it always practicable, would have a large field in the treatment of fibroids.

But, unfortunately, in case of large tumors it is impossible to get at the ovaries, and consequently the operation cannot be performed.

We might summarize the operative treatment of fibroids as follows: 1. When polypoid or submucous they may be removed through the vagina. 2. When sub-peritoneal, if causing no inconvenience, though large, leave them alone. 3. When growing rapidly or threatening life from hæmorrhage, and where the patient is not near the menopause, we may operate. (*a*) We may remove the uterine appendages if they are accessible. It should be kept in mind that it is sometimes very difficult, or even impossible, to do so. (*b*) Abdominal section and extra-peritoneal treatment of the pedicle by clamp, serre-nœud or stitching give the best results.

The Position of the Uterus with some remarks upon Displacement. — The uterus is *normally anteflexed*, which is termed the physiological anteflexion, in contrast to the pathological anteflexion described by Schultze.

When the bladder and rectum are empty, the uterus lies with its anterior surface touching the posterior aspect of the bladder, no intestine usually intervening, the external os looking downward and backward. It must not be forgotten, however, that although it is customary to speak of this as the normal position, there are in fact a number of normal positions. For as the bladder distends, the uterus is pushed back, as a whole, so that it becomes retroverted, and as the bladder is emptied the uterus returns to its original position of slight anteflexion.

Many authorities speak of the normal position of the uterus as forming a certain angle with the cervix. But they cannot have any just grounds for arriving at any fixed angle, as the mobility of the uterus is one of its most characteristic features. Its position being altered with every movement of respiration, in singing, in walking, and in all violent movements, as well as by the dilatation and evacuation of the bladder. The normal angle, therefore, may be at one time acute and at another more obtuse.

1. On spinal disease, Berlin, 1867.

*Read before the Hamilton *Medical and Surgical Journal* Club.

Let us now consider for a moment that condition termed *pathological anteflexion*. It is simply an exaggeration of the normal position. Its usual seat is at the upper portion of the cervix or junction with the body. The connective tissue framework is thinnest at the os internum; hence the usual seat of flexion is at this point. Many authorities maintain that a fatty degeneration takes place at the angle of flexion. Virchow denies this, and says "that all the difference that can be found is that the tissue is anæmic at the angle of flexion, but congested elsewhere." Two kinds of anteflexions are usually described. 1. The congenital. 2. The acquired. In the congenital the whole uterus is small and imperfectly developed, the cervix is small, with the pin-hole os looking downwards and forwards.

Fritsch explains the congenital anteflexion as follows: The uterus of the new born child has thin walls and is flexible; the intra-abdominal pressure acts on the posterior surface of the fundus and produces anteflexion; this action is counteracted by the bladder on which the uterus is, as it were moulded. When the uterus remains small and thin walled, it does not offer such a large surface to the bladder so as to be raised by it and have its flexion undone. Accordingly a pathological degree of anteflexion is produced. He also refers some cases to congenital shortening of the utero-sacral ligaments.

In the acquired anteflexion it is undoubtedly due to inflammatory changes behind the uterus. The cause of this condition was brought to our notice by Schultze, who described it as a cellulitis in the utero-sacral ligaments; this producing in its turn cicatricial contraction, so that the cervix is drawn upwards and backwards and the fundus thrown more forward.

This cause of anteflexion appears to be the most probable one, if we bear in mind the relation of these ligaments to the uterus. The utero-sacral ligaments, two in number, are folds of peritoneum, enclosing connective tissue and unstriped muscular fibre, passing from the lowest lateral part of the uterus upwards, outwards, and backwards to the second sacral vertebra, thus forming the lateral boundaries of Douglas' pouch.

It is quite evident from this, that if we have a cellulitis or peritonitis involving these ligaments and a cicatricial contraction taking place, as Schultze points out, the cervix will be drawn upwards and backwards, while the fundus will be thrown forwards. Graily Hewett refers all flexions to softness of the uterine tissue and thinness of its walls. Schroder holds that the retraction of the cervix is produced by adhesions resulting from peritonitis. Tumors and pregnancy, which increase the weight of the body of the uterus, favor anteflexion.

The two most important *symptoms* of pathological anteflexion are dysmenorrhœa and sterility.

1. *Dysmenorrhœa*—Two different explanations of the pain have been given; 1st, The one known as the obstructive theory, and, 2nd, the congestive theory.

1st. *The Obstructive or Mechanical Theory*—According to this view, the flexion of the uterus produces a narrowing of the uterine canal at the point of flexion. Hence the menstrual decidua and blood find an obstacle to their free exit. There is consequently retention and coagulation, which bring on uterine contractions to overcome the mechanical reistance, and that these uterine contractions are the cause of the pain. This is the view held by Barnes, Thomas, Schroeder and others. Emmet, Matthews, Duncan, Schultze and other authorities will not accept this theory. They maintain that there is no obstruction to the flow, that there is not an angle formed, but a mere alteration in the direction of the canal, produced by a curve. Schultze showed that during the existence of the most intense dsymenorrhœal pain, the sound could be repeatedly carried easily to the fundus without a drop of blood showing itself. He says that the pains generally begin before—sometimes long before—the menstrual flow, and persist with intensity while the flow is scanty, and as soon as the blood becomes more profuse in quantity the pains intermit and cease. The appearance of a copious discharge of blood relieves the distended vessels and diminishes the contractions and their pains. He holds that the pain is not due to any obstruction, but due to the inflammatory processes associated with anteflexion. Emmet regards the whole obstruction theory as a myth, and Duncan says that the flow of menses out of an acutely flexed uterus would not be nearly so much obstructed as the passage of water along a bend of the river Thames.

2nd. *The Congestive Theory* is advocated by

Fritsch. He says that the pain is not due to obstruction, but to the resistance which the muscular tissue of the uterus offers to the hyperæmia. He maintains that when we have a uterus bent in itself, there is an obstruction offered to the flow of blood, that the mucous membrane cannot swell up as it does normally, and consequently there is undue vascular tension and compression of the nerve-endings in the uterus which causes the pain. This argument at first sight appears well, but let us look for a moment at the normal circulation of the uterus.

The ovarian artery of each side passes between the layers of the broad ligament, running tortuously toward the upper angle of the uterus; as each artery nears the uterus it divides into two branches. One supplying the uppermost part of the uterus, while the other descends to join the uterine artery. Thus there is, as you will see (Fig. 2), a lateral channel on each side, from which branches are given off, that have a transverse direction over the uterus. These transverse branches anastomose with corresponding branches from the opposite side.

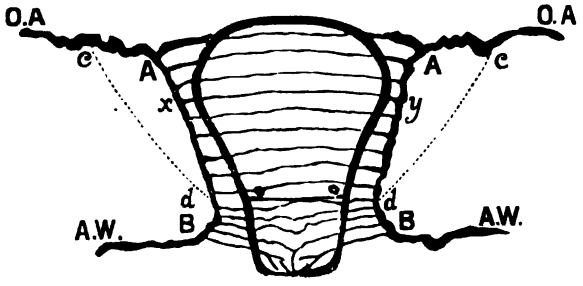


FIG. 2.

O. A. Ovarian artery; W A. Uterine artery; A. B. Lateral arterial channel on each side; O. O. Indicates the position of the internal os; X. Y. One of the transverse branches given off from the lateral channel; C. D. Position of pressure on each broad ligament when uterus is incarcerated in Douglas' pouch.

From these transverse branches, secondary smaller branches are given off, which run at a right angle to the wall of the uterus and supply the mucous surface. (Fig. 3). The veins have a similar arrangement to the arteries. So it is seen that each transverse section of the uterus has its own vascular supply, and that a flexion cannot offer any obstruction to the circulation. Besides if flexion caused congestion, we should have excessive menstruation in cases of flexion. But cases continually come to one's notice where there is marked flexion and still we have no menorrhagia. The argument brought forward by Berry Hart is more reasonable. He says that the tissues of the uterus are frequently in a state of chronic inflammation, and there is usually an increase of the connective tissue, making it of less yielding structure. The monthly flushing of the pelvis with blood would, under these circumstances, be accompanied by pain. Cellulitis and peritonitis are often present with anteflexion, and increase of pelvic congestion will, of course, produce increase of pain.

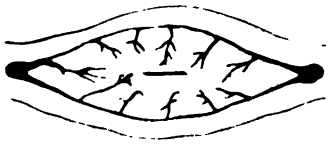


FIG. 3.

Transverse section of the uterus showing the arrangement of the uterine arteries, the arterial circles formed by their primary branches, and the branches of the latter supplying the mucous membrane.

There can be no doubt but that the connection between anteflexion and dysmenorrhœa has been greatly over-estimated. Vedeler found that out marked of 67 cases of dysmenorrhœa, 25 had well anteflexions, or 37.3%, but out of 138 cases without dysmenorrhœa 46 had well marked anteflexions or 33.3%. From this you will notice that anteflexion with dysmenorrhœa only has 4% over anteflexion without dysmenorrhœa..

Another symptom so frequently associated with anteflexion is *sterility*. This symptom is said to be due to the obstruction in the uterine canal produced by the flexion, but as there is practically no obstruction to the exit of menstrual fluid at the so-called angle of flexion, so there should be none to the entrance of spermatozoa. However this may be, the fact still remains that dilatation of the cervix places the patient under more favorable conditions for conception.

The Surgical Treatment for Retro-displacements of the Uterus—Dr. T. G. Thomas is a firm believer in the anterior fixation of the uterus to the abdominal wall, by his operation termed *hysterorrhaphy*. After he has broken down the adhesions about the uterus, he denudes the peritoneum covering the fundus, and fastens the organ by silk sutures brought directly through the abdominal wall.

Owing to the possible risk of death attending laparatomy for this ventral fixation of the uterus, another more conservative, less dangerous, and, for many cases, much more desirable operation has kept pace with hysterorrhaphy. I refer to *Alexander's* operation for the relief of retro-displacements of the uterus by shortening the round ligaments. His directions for the operation are as follows: "The pubic spine is felt for, and an incision made up and out from it, two inches in length, and in the line of the inguinal canal. The incision passes through the skin, and into the external abdominal ring, known by oblique fibres crossing it and protrusion of fat at its lower end. The tissue now bulging out from the ring (which is the end of the ligament, before reaching the mons veneris), is lifted by an aneurism needle, grasped with the finger and pulled out gently, any bands preventing this being cut with a knife. The other side is treated in the same way, both ligaments being pulled out as far as possible. The wound is then stitched, the sutures being, passed from side to side of the incision, *i. e.* through skin, pillar of abdominal ring, round ligament, pillar of ring and skin." After the operation the patient wears a pessary for some time. This operation is also performed for cases of prolapsus uteri.

I had the pleasure of hearing a paper entitled "A Modified Alexander's Operation," read at the International Medical Congress, in Berlin, by Dr. Edebohls. He makes his incision, and proceeds as Alexander does, until the external abdominal ring is reached. He then passes a grooved director along the inguinal canal, and with a knife or scissors he cuts up the full length of the canal; the round ligament is then picked up with a blunt hook, at the internal ring, and gradually drawn forwards, carrying the anterior layer of the broad ligament with it; the latter is then gently peeled off the round ligament, and allowed to drop back through the internal ring. The ligaments are then secured by passing the sutures through them in re-closing the canal. He claims that by this method the ligaments are more easily secured, less liable to be broken, and, with care, there is no reason why the peritonieum should be opened. After either of these operations, owing to the disturbance of the inguinal canals, there is, no doubt, a slight tendency to hernia, as Alexander himself admits. There is also a matter of uncertainty about finding these ligaments, and especially if pelvic adhesions, etc., have taken place.

Dr. A. Palmer Dudley condemns both of these operations on the following grounds: He claims that nature never intended that the body of the uterus should ever be fastened to any portion of the abdominal wall. The diaphragmatic action of the pelvic floor is one of nature's safe-guards against intra-abdominal pressure in breathing, in exercise, and, to some extent, in disease. He maintains that if the uterus be fastened to the abdominal wall it will interfere to a great extent with the proper actions of the muscles of the pelvic floor. It will also imprison the bladder to a marked degree, necessitating its expansion in a lateral rather than in an upward direction, thereby bringing into action two opposing forces, one from above forcing the uterus downward, and another from below forcing it upwards; and that this action after a time separates the union between the uterus and abdominal wall. For these reasons Dr. Dudley has introduced a new operation: He denudes with scissors the peritoneum from the anterior wall of the uterus in an oval shape, taking care not to go too near the bladder. Then each round ligament is brought up and a portion of peritoneal covering upon the inner side of it denuded to correspond with that upon the uterus. The three denuded surfaces are now stitched together with a continuous catgut suture, and the uterus allowed to drop back into the pelvis. Dr. Dudley has operated with success in this way on a number of cases, and claims the following advantages for his operation over either hysterorrhaphy or Alexander's operation.

1. It corrects the displacement by utilizing the natural supports of the uterus without sacrificing any of them.

2. The proper diaphragmatic action of the pelvic floor is not interfered with.

3. The bladder is not imprisoned in the least, and its proper action is undisturbed.

4. There is no chance for intestinal adhesions to take place about the line of sutures, for the latter lie in apposition to the posterior surface of the bladder, and adhesions taking place at this point simply elongate the utero-vesical junction.

5. In cases of impregnation the uterus is free to rise in the abdominal cavity naturally.

6. The use of catgut as a suture material in this operation, does away with the dangers of the formation of sinuses, as occasionally happens in ventral fixation.

Selected Articles.

HOW A GENERAL PRACTITIONER MAY TREAT CHRONIC ATROPHIC RHINITIS.

From the time when the Chinese Emperor, Hoang-ty, four thousand five hundred years ago, first described specific ozœna until the present day, the treatment of chronic atrophic rhinitis has been, more or less, the bug-bear of the general practitioner of medicine. True, the modernizing influence of thorough-going reason has shorn the disease of much of its mystifying elements, still to many, even in this enlightened day, it remains a book sealed with the superstition of the past, and bound tightly by the cords of enforced destiny.

Notwithstanding the great amount of literature which has resulted from the pains-taking study of this disease, the vast majority of doctors are indifferent, some perhaps ignorant, as to its proper treatment. Some do not believe that an iota of benefit can result from treatment of any kind; others declare that they have no desire to treat it; still others, by temporizing, hold their patients day in and day out, in the vain hope that some kindly providence may relieve doctor or patient. Amid all this array of indifference, disinclination and lack of knowledge or its application, is it strange that the poor sufferer should read, with a shudder, the advertisements which deal out his symptoms so exactly, and which alarm him by unnecessary enunciation of dangers which never occur? Is it to be wondered at that his mind becomes filled with visions of consumption—visions which, by reason of their indistinctness, magnify the evils thus portrayed? Is it remarkable that he should swallow with avidity such unwholesome morsels as this: "The microbe of catarrh, in your sleep, crawls down your throat, and coming in contact with your lungs, produces consumption?" Is it further a matter of wonder that the poor, bewildered mortal, whose fears have now changed his nose into a mountain of woe, ready to boil and to seethe with the fury of evil spirits, should seek his family physician, and, receiving the unsatisfactory advice, which in many cases he will get is it strange, say I, that he should place his tender organ of facial ornamentation into the hands of a quack! I think not. From a popular standpoint, at any rate, the charlatan who boasts loudly of his cures, and who points out the evils that may result, knows far more than the dilly-dallying doctor. Here lies the trouble, doctors imagine the nose is beyond their ken, too far removed for their comprehension, in fact, many do not hesitate to say so. Why, bless you! those same doctors would never admit a lack of knowledge in the treatment of a cervicitis or an endometritis, and yet the organs concerned in these latter diseases are far more difficult to examine than the nose.

Thoughts such as these are calculated to make a specialist ponder, and to seek some plan of benefit. That some good may come from a tacit and clear statement of the treatment of this disease, I am assured; and that the general practitioner will, by the application of a few general rules, be able to benefit almost all of these cases, I am still more assured. I have seen this very thing exemplified in my own students in the Marion-Sims College of Medicine, to whom I have assigned cases for treatment in the clinic, with results highly satisfactory. What students are thus enabled to do, I feel certain that the great body of our upright, conscientious and earnest practitioners of medicine can do far better.

Many means have been devised and many remedies have been suggested for the treatment of this very refractory disease, but as its theoretical consideration forms no part of the subject of this paper, they are placed aside. Therefore the radical treatment of the disease, requiring, as it does, an extensive knowledge and technique, will not receive attention. That the disease is ever entirely cured, is still a controvertible question. Reports have been made of cures by cauterization with chromic acid, and the galvano-cautery, and by galvano-cautery, and by galvanism of the nasal mucous membrane.

The condition can be ameliorated! Not only this, but every practitioner who possesses an intelligent conception, may become the high priest of this benediction.

From the nature of the disease, the vitiated secretion and scab formation which go with it, one can easily understand that two features of treatment are indicated, viz.: cleanliness and stimulation, cleanliness so that there can be no irritation from the presence of scabs, and for the thorough application of medicines, and stimulation, to counteract the passive inflammation, and to cause the blood, more nearly to approximate the normal.

Now, cleanliness does not mean the promiscuous douching or spraying of the nose—by no means. The most persistent care must be taken to remove every scab and particle of abnormal discharge. Granted—but how can this be done by the general practitioner? Easily enough. His *armamentarium nasale* need not be very extensive. A lamp, a student's lamp being preferable, a head mirror, a nose speculum, a small cotton applicator (a knitting needle with one end roughened will answer), constituting an equipment not elegant,

but sufficient. The cost, exclusive of the lamp, is little enough, being less than $4.00. Cotton, absorbent or borated, should be on hand, as well as plenty of the old-time Dobell's solution, or the following modification, which I like better:

℞ Sodii Bicarbonatis . . .
Sodii Biboratis āā . . . ʒjj.
Listerine or Katharmon . ℥ss.
Aquæ q. s. ad . . . . ℥viij.
M.—Sig. Nose-wash.

To the list I should perhaps add some sort of atomizer or post-nasal syringe, costing in either case not more than $1.25. However, one could get along without either of these. The nose should first be sprayed out with the solution whose formula I have just given (better warmed) or by means of the post-nasal syringe the cavities can be washed out from behind. Understand, however, even this does not constitute the cleansing of the nose, for after this has been done, the work really begins. The light being reflected into the nose, held open by means of a speculum (Knight's modification of Duplay's preferred) the probe, to which a pledget of cotton is attached, is made to dislodge and to remove each scab or portion of discharge which is presented to the view. Anyone can do this, for anyone can see the scabs and can with ease remove what he sees. This accomplished, the nose is clean, and the first essential part of treatment has been applied.

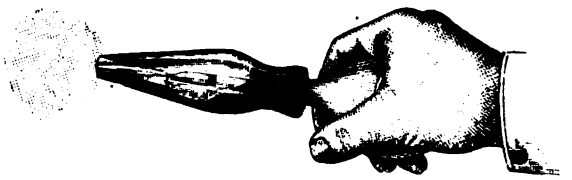
For the stimulative plan of treatment, various drugs have been recommended, out of which I select menthol, thymol and eucalyptol as having been most efficacious in my hands. I have used menthol more frequently than any of these agents, and have been so well pleased with its action that I should be unwilling to exchange it for any other remedy. The following is the customary formula:

℞ Menthol . . . . . gr x.
Liquid Albolene . . ʒj
M. Sig.—Spray for the nose.

The amount of menthol may be increased to gr. xx or even ʒj to the ounce. This, or thymol, gr. x to ℥j liquid albolene, or eucalyptol gtt. x to ℥j liquid albolene, should be well sprayed into the nose, first directing the patient to breathe through his open mouth, thereby shutting off the oro-pharynx and causing the spray to pass out of the other nostril. The first sensation is that of warmth, and no little itching is frequently occasioned; but this is soon succeeded by a feeling of coolness and comfort in the nose, which is gratifying to the patient. While the menthol, thymol and eucalyptol have a stimulative effect, the liquid albolene is not void of benefit. It takes the place of vaseline of quondam fame, but possessing nothing of the almost nasty character of the latter. By means of the spray the oily albolene is thrown over a large portion of the mucous membrane, and by bathing it with an oily film, aids not a little in its improvement. This cleansing out and treatment of the nose should be done every day, if possible, for some little time; later, the intervals may be lengthened. It is useless to attempt any permanent or even transitory improvement, for that matter, by treating the nose twice a week, or less; three times a week is seldom sufficient at the outset.

Nor is this all there is in the treatment. The patient should be directed to clean his nose three or four times daily, by snuffing up Dobell's solution, or the modification which I have given, and thereafter to use a spray of menthol, thymol or eucalyptol and albolene. A special sort of atomizer must be used from the fact that all atomizers do not act with oily solutions. Each patient must provide himself with one and use it three or four times daily. The Codman & Shurtleff, No. 356, or the Brooklyn Throat Hospital atomizer will answer. The latter is better for the doctor, in that having three nozzles it may be used for the nose, pharynx or larynx.

Of late I have been using a new atomizer lately designed and manufactured by the A. M. Leslie Surgical Instrument Company of St. Louis, the Acme Vaseline Atomizer; in fact, I now prefer it to any other kind. It has the advantage of simplicity and cleanliness. Though intended as a vaseline atomizer, it can be used to the greatest satisfaction for the spraying of liquid albolene.



I would again urge that, whatever the form of the atomizer, it should be used systematically, thoroughly and regularly. It is surprising how much better the patient will become under this sort of treatment; the excessive scabby discharge ceases, the odor disappears, the hawking diminishes and the patient's mind turns to other thoughts than an untimely death from the fancied change of catarrh into consumption. Not only this: the relief is so decided and rapid in its occurrence, that the patient becomes a friend and patron whose good word will reflect credit and money to the doctor who is so fortunate as to have applied this plan of treatment.

It is well to state one danger which may occur not only from this form of treatment, but in any case where douching is used: I refer, of course, to the otitis media, catarrhal or suppurative. Where there is the slightest tendency to this disease, one must be guarded and must avoid the douche, and sometimes the spray. In such cases the only

recourse is to remove the scabs as well as possible by means of a probe and pledget of cotton.

Very naturally there are other plans of treatment which are not to be despised. I desire to make no reflection whatever upon any other method. This I do say, however, the method which I have detailed is one which must commend itself to every one. It is simple in its application, scientific in its proceedure and sufficiently easy in detail as to be within the range of every practitioner of medicine.

I turn now to the title of my paper: "How a general practitioner may treat chronic atrophic rhinitis." I feel that I have answered the question in so tangible a manner that its acceptance and adoption by the general practitioner is a matter of choice and not one of long-considering deliberation. The question narrows itself down to this: Will you treat these simple cases in this simple manner, to the credit of yourselves and to the benefit of yourselves, or will you, with less pride, less reason and less professional honor, allow those who have placed their well-being in your hands, to go on day by day, without any relief, subsequently to fall into the unscrupulous hands of some catarrh nincompoop? I believe you will adopt the former course.—H. A. Loeb, M. D., in *Saint Joseph Med. Herald.*

DR. APOSTOLI'S LATEST CONCLUSIONS ON THE CONSTANT GALVANIC CURRENT IN GYNÆCOLOGY.

The following summary of Dr. Apostoli's conclusions in regard to the subject of which he is at present the greatest authority, will be of interest to our readers:—

1. The constant galvanic current, he says, is indicated in gynæcology principally in endometritis and in fibroid tumors. It is very effective in abnormal conditions of uterine circulation (amenorrhœa and menorrhagia) as well as in painful menstruation; is a powerful aid in arresting the development of simple neoplasms and in facilitating the absorption of peri-uterine exudations. It exercises a salutary action towards resolution in many peri-uterine phlegmasiæ, and in certain forms of catarrhal ovaro-salpingitis; but it is powerless in suppurative inflammations of the appendages, nay, even it is injurious in strong doses, particularly if the intra-uterine pole be negative. The variable intolerance of the current which increases with the degree of the inflammatory action of the appendages serves as a valuable means of diagnosis in determining the existence and the nature of undetected or only suspected peri-uterine fluid collections, hæmic or suppurative, and in deciding the necessity for surgical interference or not.

2. The effects of the constant galvanic current are polar and interpolar. The interpolar action is trophic and dynamic, which increases as the square of the intensity of the current used, and is superadded to the polar action. The polar action is utilized for a different purpose according to the pole employed, as first shown by Apostoli himself. A calorific action is developed by the passage of the current which augments the interstitial circulation; and lastly, the antiseptic action of the positive pole has been recently demonstrated by Apostoli and Laguerriére.

3. Strong galvanic applications exceeding 50 milliampéres, employed in a variable manner according to the tolerance of the individual patient and the special clinical indications form the basis of Apostoli's method, and find their justification in the circulatory depletion, "*drainage circulatoire*," a direct consequence of the calorific action due to the resistance offered to the passage of the current, and proportionate to the square of the intensity; in the antiseptic or germicidal action, which increases with the intensity of the current used; in the rapidity and efficacy of the effects produced, which are proportionate to the square of the electric energy, according to a formula analogous to that of the measure of energy in other natural forces: $Q = \frac{1}{2} m V^2$; in the easier generalization of the method as applied to obstinate cases, as hard fibroids of the subperitoneal variety or fungous endometritis, and to conditions in young subjects; and in lessening the frequency of relapses, which, all other things being equal, are less to be feared the stronger has been the current employed.

4. If the vaginal application of the galvanic current (which is the method introduced by M. Chéron for fibroids only, and applied since by A. Martin, Brachet, Ménière, Onimus, Carpenter, Munde, and others) produces certain results, these are very inferior to those obtained by intra-uterine applications, which must remain the method of selection, because it utilizes at once the maximum of the current expended and of its energy, and at the same time the antiseptic action of the positive pole, which is entirely local, and which disappears in the interpolar circuit and at the level of the negative pole. It also utilizes the derivative and caustic action of the intra-uterine application, thus treating at the same time either a simple endometritis or, as is often the case, one complicating a fibroid or a peri-uterine inflammation, and ensuing thereby a more rapid, more complete, and more permanent cure. It also enables us better than by vaginal applications to palliate pain, and to render the use of strong doses more tolerable.

5. The vaginal galvano-punctures to the depth of from two to five millimetres, by means of a filiform trocar made of gold, insulated in all its extent except at the point, form the complement of intra-uterine electro-therapeutics introduced by Apostoli as a more accurate means of localizing galvanic

action, and of increasing the efficiency in certain cases of the application of small or medium doses.

6. The innocuous character of his intra-uterine electro-therapeutics is demonstrated by comparing it with those of the chemical and operative intra-uterine methods of treatment, and particularly by comparative statistics. Dr. Apostoli made from July, 1882, to July 1890, 11,499 galvanic applications, as follows:—8177 positive intra-uterine galvano-caustic, 2486 negative intra-uterine galvano-caustic, 222 positive vaginal galvano-punctures, 614 negative vaginal galvano-punctures. He has treated 912 patients, comprising 531 fibroids, 133 cases of simple endometritis, and 248 of endometritis complicated with peri-uterine inflammation.

Of these 313 fibroids, 70 cases of simple endometritis, 163 of endometritis complicated with peri-uterine inflammation occurred in the clinique, and 218 fibroids, 63 cases of simple endometritis and 85 complicated, with peri-uterine inflammation, occurred in private practice. He has had three deaths attributable to operative defects. Two galvano-puncture, of which one was for a subperitoneal fibroid, the other for an ovaro-salpingitis, and one galvano-caustic application for a cyst of the ovary, mistaken for a fibroid.

He has observed 30 cases of pregnancy which occurred after intra-uterine galvanic applications. —*The Lancet*

EARLY DIAGNOSIS OF SOME SERIOUS DISEASES OF THE NERVOUS SYSTEM; ITS IMPORTANCE AND FEASIBILITY.

VERTEBRAL DISEASE (CARIES, ETC.).

It may seem strange that I should call your attention to conditions which apparently belong to quite a different specialty from neurology; but, gentlemen, the first and the last symptoms of these diseases (spondylitis, caries of the spine, vertebral cancer) are nervous symptoms. The case appears at first as one of rebellious neuralgia or muscular rheumatism, and lastly as one of paraplegia. The early symptoms do not very distinctly point to the vertebræ as the site of disease; and thus usually the cases remain a long time—during the best time for successful treatment—in the hands of the general practitioner; then, later, they are passed on to the neurologist or orthopedist.

Many precious months are thus lost. Yet, if the few symptoms present during the first stage of these diseases are rightly appreciated and correctly interpreted, I believe a diagnosis should always be possible long before angular curvature (representing the breaking-down of one or several vertebræ) or tumor appears. The early symptoms of spondylitis or tumor are the same in *kind*, no matter what part of the spine is affected, but their distribution varies according to the location of the lesion up or down in the vetebral column. This distribution is so peculiar as to enable us to tell with almost absolute certainty which vertebræ are affected.

The capital symptoms of the first stage of Pott's disease or of vertebral cancer are only two in number, namely: (*a*) a fixed pain seemingly of a neuralgic character, far away from the spine. (*b*) Rigidity of certain muscles attached to the spinal column; a reflex protective or conservative spasm. The distant pain is increased by attempts to overcome the muscular spasm, and by jars.

It will be necessary to consider these symptoms as distributed when the disease (caries, tubercle or cancer of the vertebræ) attacks different regions of the spinal column.

(*a*) The "neuralgic" pains, and spasm.

(1) Disease of the uppermost cervical vertebræ, spondylitis colli, is not rare. The patient complains in the first place, and chiefly of pain in one occipital region, aggravated by motion or jar. On analysis, we find the pain to follow the range of distribution of the greater and lesser occipital nerves; one or both. Occasionally there is also pain in the temple of the same side. Almost invariably this neuralgic pain for which the patient asks relief, is unilateral.

Inspection reveals at quite an early period, a slight or decided "wry-neck," a deviation of the head from its proper vertical position. It is a peculiar oblique attitude, dissimilar from that produced by (functional) spasm of one sterno-mastoid. Any attempt to correct this deviation, and indeed any passive movement of the head and neck cause greatly increased pain in the occipital region (not in the spine). Sudden pressure on the top of the head by the physician's hand causes excruciating pain of similar distribution. The spine itself is not tender or deformed. The patient tells you that the jar of a carriage or horse-car, or of a false step, causes intense agony. Some patients very early acquire an instinctive habit of supporting or steadying their heads with their hands, to avoid effects of shock. Further examination shows that the deeper cervical muscles, extensors, flexors, and rotators are in a state of constant spasm, more especially on the side of the pain.

Let us see if anatomy helps us in diagnosis The occipitalis major nerve is mainly a branch of the second cervical nerve; the minor, of the first cervical nerve. They, however, have branches of intercommunication. Most filaments of these nerves are sensory, supplying the scalp of the occiput and parietal regions. Motor fibres from these two cervical nerves supply the small, deep muscles which govern the movements of the skull upon the vertebral column.

Consequently, both the "neuralgia" and the spasm point infallibly to disease in or about the

two upper vertebræ. The exact nature of the lesion may be in doubt, but we have by strictly scientific methods located the disease; it is so placed as to irritate the first and second cervical nerves.

(2) Disease of the lower cervical vertebræ is very rare. In such a case the pain would be in the lower part of the neck, or in one arm or hand according to the exact location of the lesion. The spasm would be in the lower cervical muscles and in those of the arm.

(3] The most common location of these lesions is in the dorsal region, between the fifth and the twelfth dorsal vertebræ. Many and many a child is treated for months for "colic" because he complains of a pain in one side of the abdomen. The too frequent neglect of thorough objective examination here leads to the erroneous diagnosis of intercostal or abdominal neuralgia, or of colic; even of "hepatalgia," according to the exact seat of pain. The muscular symptoms are present here also, but not in as striking a shape as in spondylitis colli. They must be sought for by careful examination. This reveals one of several conditions or several combined. The respiratory thoracic or abdominal movements on one side (rarely on both) are hindered, and the muscles appear to palpatation hard or rigid. The various movements of the spinal column are not normally free. Turning the head about as if to look for something is done by a turning of the whole body, flexion and extension (latero-flexion more especially) of the spine are checked by pain, or directly hindered by rigidity of the erector spinæ muscles. A segment of dorsal spinal column is rigid during all attempts at movement. The tenderness of the dorsal nerves cannot be demonstrated by direct testing with finger pressure, but it is strikingly revealed by what I call the heel-jar test. This consists in placing the patient standing in the military position of "attention," on a hard floor. Then tell him to rise on his toes, and then suddenly to drop his whole weight on his heels, If there is vertebral disease, decided or excruciating pain is caused by this jar, not in the spine but in the location of the "neuralgia" for which the patient consults you. This heel-jar test is useful in any location of the vertebral disease. The origin of the nerve which is the seat of pain, the range of the muscular rigidity will enable us to localize the lesion to the exact vertebra or vertebræ.

(4) The lumbar vertebræ are sometimes diseased. In such a case the pain would be in the groin and anterior and inner parts of the thigh; the spasm in the same parts; especially in the psoæ and iliac muscles.

(5) Caries of the sacrum gives rise to pains in the perineum, posterior part of the thigh, and in the leg and foot. Cramps or spasms would occur in the same parts (seldom present).

The general diagnostic law may be formulated as follows: The seat of neuralgia and of spasm, though occasionally not in corresponding parts, clearly refer to irritation (compression) of one or more spinal nerves on one side. A knowledge of the distribution of spinal nerves enables us to state with great accuracy which vertebræ are diseased.

(*b*) With reference to paralytic symptoms.

Occasionally they appear before actual destruction of bone brings about angular curvature; the spinal cord being compressed by inflammatory or caseous masses originating in pachymeningitis; or by a tumor. When the disease affects the two upper cervical vertebræ, the paralysis may be hemiplegic, face not affected. This is because the caseous masses have formed on one side of the canal and exerted pressure on one side of the spinal cord, where the large crossed pyramidal fasciculi run downward; hence hemiplegia. Below the level of the second vertebræ the masses which compress the cord are formed anteriorly as a rule, and cause pressure almost equally on both sides of the median line; hence paraplegia; of the type "cervical paraplegia," where the whole body below the neck is paralyzed, or "common paralegia," when the lower limbs and a varying extent of the trunk are paralyzed. It is important to determine the uppermost limit line of the paralysis, as this usually indicates the limit of intra-vertebral lesion.

When caries exists in the mid-dorsal region, vesical paralysis (retention) is, in my experience, a very early symptom; sometimes existing without other paralysis. With disease of the upper cervical vertebræ we also observe paralysis of the small, deep muscles connecting the head with the spine ("loose head").

When the lumbar vertebræ below the second, or the sacrum is the seat of caries (or cancer), a very peculiar paralysis results, As there is no spinal cord below the level of the first lumbar vertebræ, pressure below this point will affect only nerve-bundles: the constituents of the *cauda equina*.

Physiologically, therefore, the resultant paralysis is a peripheral or neural paralysis (precisely the same as when an outside nerve-trunk is injured), characterized by a flaccid atrophic paralysis, with degenerative reactions; co-extensive anæsthesia; absence of all reflexes; relaxation of the sphincter ani and vesical paralysis. The paralysis is nearly all below the knees, as some of the thigh-muscles are supplied by the crural plexus.

We can thus—I hope to have made it clear and easily understood—readily make a diagnosis of a vertebral bony lesion or of an intra-spinal tumor at a very early period; months before angular curvature (kyphosis) or external tumor shows itself. In my opinion there is no justification for waiting till kyphosis appears before reaching a diagnosis. The exact seat of the lesion we can, also, by the

help of anatomy, always determine with accuracy. The further diagnosis, namely, that of the nature of the vertebral lesion, is a most interesting but complicated problem, which I cannot enter upon to-night. The neural irritation or spinal-cord compression, may be due to pachymeningitis, to vertebral caries (spondylitis), to peri-vertebral or intra-vertebal tumors, or to cancer of the bodies of the vertebræ themselves.

Let it suffice if I have made it clear, that occipital neuralgia, with rigid, painful wry-neck; intercostal or abdominal local pains (neuralgia so-called), one-sided pains along some nerve of the lower extremities; with associated spasm, mean, or at least suggest, vertebral disease of some sort, and call for a careful objective examination, instead of an off-hand prescription, for the symptom complained of.

CHRONIC ENLARGEMENT OF THE TONSILS OF CHILDREN.

Gentlemen: The first case I have to show you this morning is one of a character which is quite frequently met with, namely, an enlargement of the tonsils with some follicular inflammation, but chiefly consisting in an increase in the connective tissue, an interstitial tonsillitis of a chronic type. This condition is accompanied by a protrusion of the tonsils across the pharynx, in this case touching the uvula on one side, and almost touching it upon the other. Often the uvula is touched upon both sides. On examining this throat, you will notice that the mucous membrane over the tonsils is hyperemic, reddened and inflamed, but not covered with the white spots which are frequently seen. This tells us that this is not a case of pure follicular tonsillitis; for in it we have large quantities of a cheesy material poured out, which so closely resembles the false membrane of diphtheria, that a false diagnosis is often made. The exudate can be removed, however, on a small probe and leaves behind it no bleeding or raw surface. This is not the case in diphtheria, where the membrane is adherent, and on removal leaves a bleeding surface. In acute tonsillitis, true quinsy, or suppurative tonsillitis, death seldom occurs. It is curious that strangulation does not more frequently occur from rupture of the abscess during sleep, or that pneumonia does not result from the swallowing or breathing in of this material, the so-called *Schluck-pneumonie* of the Germans.

Most commonly these cases come to the physician because the child has a constant paroxysmal cough, which almost ceases during the daytime, but is persistent at night, especially in the early hours of sleep. A careful examination of the chest in these cases of tonsillitis shows no sign of pulmonary trouble. The cough is a pharyngeal or uvular cough due to irritation. The cause of the cough is not identical with that of an ordinary cough, but is due to the two enlarged tonsils which protrude and tickle the uvula. During the daytime the muscles are held tense, and the tonsils are thus prevented from touching the uvula; but if an involuntary relaxation occurs, as in sleep, the uvula is tickled, cough results, and the child awakens. At times it is even necessary for the child to sit up in bed to relieve the cough.

It is difficult to treat such cases; much more so than cases of acute follicular tonsillitis, which may be treated with diuretics and cardiac sedatives, and with the local application of cold or heat. In the treatment of the present variety, several interesting points must be considered. Is chronic interstitial fibrous enlargement of the tonsils severe enough to interfere so seriously with respiration as to make the removal of the tonsils necessary? A great many physicians, especially in France, recommend their removal. On the other hand, I have seen several experienced surgeons operate upon the tonsils and encounter excessive hæmorrhage. As you well know, any severe operation upon the mouth is very apt to be accompanied by profuse hæmorrhage.

The next heroic treatment after tonsillotomy is igni-puncture or the use of the actual cautery. It consists in the insertion into the enlarged mass of a small electric cautery, or the ordinary red-hot iron. The inflammation which ensues around the burns results in fibrous or cicatrical contraction, with a consequent decrease in size of the organ. This results in a ragged-looking tonsil, with crypts in which food may accumulate and undergo decomposition, with the production of fetid breath. A mouth wash or gargle of carbolic acid (1 to 100), sweetens the breath and prevents decomposition from going on. Notwithstanding its drawbacks, however, igni-puncture is the operation to be resorted to, instead of tonsillotomy. It is safer and just as efficacious. However, in all these cases, the patient at first desires you to temporize with medicinal measures; and probably the best medicine for an adult is iodide of potassium, five grains three times a day, at the same time painting the tonsils with equal parts of iodine and glycerine, or one part of iodine to three parts of glycerine, and also painting the skin externally with tincture of iodine, or rubbing in iodine ointment. If you employ iodine ointment over enlarged glands in children, it must be mixed with lard; as it is too strong to be applied in its officinal strength. Simple or benzoated lard may be used with an equal amount of the iodine ointment. If the child is of the age of this one (8 years), probably you will not be able to give it iodide of potassium in effective doses, as the drug would be apt to disorder the stomach. You

should use in its place the syrup of the iodide of iron internally. Most of these children are anemic, and iron is needed. Iodide of iron also exerts a peculiar influence over inflammation of the upper air passages. The syrup should be given in doses of five drops or more three time a day.

On looking at this child's tongue you will notice that it is black. This is due to the iron, which also blackens the fæces. The discoloration is due to the presence of sulphide of iron. It is well to warn the mother that this will occur, to prevent needless alarm.

To be more definite, what shall we do for this case? We shall give her five drops of the syrup of the iodide of iron three times a day, and apply externally over the enlarged tonsils ichthyol ointment, night and morning, two drachms to the ounce of lard. If no irritation of the skin is produced, we shall apply it at noon as well. It is impossible to make applications to the tonsils internally every day, and it is dangerous to give iodine solution to parents of young children, with which to paint the child's throat. If I should give anything, it would be a solution of one drachm of tannic acid to two ounces of glycerine, to be applied with a camel's-hair brush.

I forgot to mention one other course of treatment which may be resorted to after igni-puncture, and that is the use of the solid stick of silver nitrate. This is especially useful when there is a complication of chronic interstitial tonsillitis with follicular tonsillitis. By using the stick in these cases you mildly cauterize the tonsils, and achieve good results.

The slight deafness which is frequently complained of by patients with enlarged tonsils is due to an extension of the inflammation from the tonsils to the Eustachian tubes, which either become patulous or plugged with mucus.—H. A. Hare, M. D., in *Med. and Surg. Rep.*

MR. JONATHAN HUTCHINSON ON THE RELATIONSHIP OF LUPUS TO TUBERCULOSIS.

A few days ago Mr. Jonathan Hutchinson delivered an important lecture on "The Nature of Lupus, with Especial Reference to its Relation to Tuberculosis," at the examination hall of the College of Physicians and Surgeons. It is, I believe, the first time that such a use has been made of the building, and the occasion was the commencement of the second London post-graduate course, in which, from its beginning, Mr. Hutchinson has taken great interest. The audience, which numbered about one hundred persons, included Sir Joseph Lister and Sir Andrew Clarke.

At the commencement of the lecture Mr. Hutchinson demonstrated the prominent features of the disease, as exemplified in a young woman whom he brought before his hearers, and pointed out how the disease tended to attack the areas especially concerned in flushing or blushing, and those much exposed, for example, the cheeks and tip of the nose. Premising that he approached his subject solely from a clinical point of view, he said that the first thing to consider was whether the typical form of lupus vulgaris is always of bacillary origin. There are two possibilities to be borne in mind; first, the lupus-process may be always due to the implantation of the parasite bacillus in the tissues, or, second, the process may originate as a variety of inflammation, induced by any one of many local causes of irritation and nutritional change. He at once expressed his own leaning to the view that it is highly improbable that true lupus is always the result of contagion, and that it usually begins in inflammatory action made peculiar by the special proclivities of the individual. In his opinion, lupus is not always a well-defined and easily-recognizable disease, and no symptom or set of symptoms will enable one to recognize with certainty all cases of lupus, and to determine what should and what should not be included under that name. His definition of the lupus-process was given in the following words: "Whenever a chronic inflammation of skin or of mucous membrane, not due to syphilis, shows a persistent tendency to spread at its edges, to produce satellites near it, and to leave a condition of scar behind it, such a process is for me one of lupus. In a few cases the production of satellites may be omitted and the patch may remain absolutely single, but its infective edges and the resultant scar are essential. No form of lupus is without them, although it must be admitted, perhaps, that in a few the demonstration of the scar may be difficult. There is another condition which when present is to trained minds definitely diagnostic of lupus. I refer to the presence beneath a thinned layer of epidermis of a deposit or growth of semi-translucent granulation-material, often in considerable thickness. This 'apple-jelly-like' deposit, as it has been named, is, when present, perfectly characteristic of common lupus." Amongst minor features of the lupus-process he mentioned that if the surface does not ulcerate it is usually covered with white papery flakes of epidermis which, however, do not fall off; if the patch is ulcerated a dried crust forms, which, when removed, leaves a bleeding surface."

Lupus vulgaris is most common on the tip of the nose, the next most frequent seat being the cheek. It is not uncommon on the limbs but very rare on the trunk. The patches are never symmetrical. Though occasionally seen in children, it does not often develop until after the period of

puberty. The lymphatic glands, lungs, bones, joints, and intestines, are never affected. Nothing is less common than to see a lupus-patient develop phthisis. The most typical forms are often co-incident with good general health, and with the absence of any family history of tuberculosis. He believes that lupus is as closely related to cancer as to tuberculosis, and that an unbiased statistical investigation would show that the latter association is not so frequent as is commonly assumed.

Reminding his hearers that syphilitic symptoms could imitate lupus, he said that since syphilis in its tertiary stage is only a chronic infective inflammation, deriving its peculiarities from the antecedents of the patient, and having nothing whatever to do with tuberculosis or bacilli, it is reasonable to suppose that lupus, which so exactly resembles it, might also be a process of chronic inflammation made peculiar by the vital proclivities of the patient. If lupus were of bacillary origin he thought it remarkable that in gland struma the skin does not assume a lupus-state and that the glands never become involved in lupus. Of primary tubercular ulceration of the skin he has had no personal experience but tubercular ulceration of mucous membranes presents characters quite distinct from those of lupus in that situation.

In conclusion he said, "I may own that the sum of the evidence seems to me much in favor of the belief that lupus is a specialized form of chronic inflammation rather than the result of infection. In suggesting this I am well aware that it is merely a negative conclusion, which is liable to be overthrown at any time by the accumulation of positive evidence. It may be that in the future the presence of bacilli in lupus-products may be demonstrated in earlier stages, and much more constantly than has yet been the case. The results of Koch's injection-treatment may possible force us to believe that there is something about lupus which connects it far more closely with tuberculosis than I have admitted."—*Correspondence Med. News.*

MANAGEMENT OF LINGERING LABOR.

A discussion on the modern methods of managing lingering labor, before the British Medical Association, was opened by Dr. W. S. Playfair. After referring to the dread of meddlesome midwifery, on the part of leading obstetricians, of thirty-five years ago, and the readiness with which these men resorted to bleeding and debilitating medication, the speaker proceeded to review the methods of the present day. The mere wear and tear of a labor lasting more than twenty-four hours seemed to him to be a very serious thing, and he did not think it right that we should sit with hands folded waiting until serious symptoms should arise before taking action. He first considered the frequently-met-with difficulty arising from non-dilatation caused by inertia, or by irregular and cramp-like pains, premature rupture of the membranes, and over-distension of the uterus from excessive liquor amnii. For the relief of rigid os uteri prolonging the first stage of labor, Dr. Playfair advocated most strongly the internal administration of chloral hydrate. Under the use of this agent the pains become longer, steadier and more efficient. The patient falls into a somnolent condition, dozing quietly between the pains, which are not lessened or annulled as when chloroform is used. The wild state of excitement is calmed and soothed. Fifteen grains should be given at the first dose, repeated in twenty minutes. Possibly a third dose may be required, but never more.

As an oxytocic Dr. Playfair recommended quinine. In a labor with feeble, ineffective pains, one or two doses of quinine of fifteen grains each will have a beneficial effect in altering the character of the pains. This drug does not possess any of the dangerous properties of ergot.

Speaking of mechanical means for producing dilatation of the os, the speaker referred to a suggestion first made by Trenholme, of Montreal, that the finger be swept around the inner surface of the os, separating it from the membranes. Why it is so Dr. Playfair did not know, but he was satisfied that this simple procedure did excite marked dilatation of the os.

When the head is pushed down low in the pelvis, the os being soft and relaxed, and the membrane ruptured, it was his belief that gentle manual dilatation, pushing, as it were, the os over the head, is frequently extremely useful. Pushing up the swollen anterior lip when impacted between the head and the pubes is not only legitimate, but essential to save injury to the os.

In prolonged second stage, Dr. Playfair referred to ergot and condemns its use at this time in the strongest terms. The only oxytocic he would recommend at this period of labor was manual pressure applied over the uterus to increase the pains when they are feeble, or to take place when they are absent. The best way of using it is for the practitioner to stand by the side of the patient, and to spread his left hand over the fundus. When the pain comes on, strong downward pressure is made in the direction of the axis of the brim. If the finger of the right hand be placed simultaneously on the head, *per vaginam*, it will be felt to be pushed down in a very marked way. One may often push a head through the brim where it has been delayed for hours and on to the perineum in two or three pains. One may often avoid the use of forceps.

As to the latter means, the speaker expressed the fear that there was a tendency to use the instruments too frequently. In the period from 1815 to 1821, 21,867 cases of labor were treated at the Rotunda Hospital, Dublin, without the forceps being used once. The present practice in this institution is such that forceps are now used on an average of 1 in 16.5 cases. The use of the forceps when the head is high up is a serious operation always and should not be undertaken lightly.

Unnecessary delay, when the head is in the pelvic cavity, is not only useless, but dangerous. By timely interference we lessen the risk to both mother and child. It is quite impossible, however, to lay down any precise rule as to when the forceps should be used in lingering labor. Every case must be treated on its merits, after a careful examination of the effect of the pains.—*Brit. Med. Jour.*

THE TREATMENT OF HÆMORRHOIDS.

Dilatation of the sphincter may not, in a surgical sense, be worthy the name "operation." If such is the case, I advise the "family doctor" to appropriate it, for, with the multiplied and multiplying specialties devoted to diseases affecting all organs and tissue between the fields of the alienist and chiropodist, inclusive, there is very limited territory in which he may practice.

My confidence in the superiority of the treatment by dilatation was secured by the same nature of accident which convinced the French surgeons —that is, by observing the complete and permanent disappearance of a number of large internal pile tumors in the case of a gentleman who, in connection with his other trouble, developed an anal fissure, dilation for the cure of which also cured hæmorrhoids.

Dr. Brenton of this society reports similar experience, his patient being a lady who had suffered greatly from strangulation of the tumors and great loss of blood; her fear of any operation suggested for the cure of the piles was to great to be overcome, but the fortunate intervention of an anal fissure induced her to consent to the procedure of dilation, with the result of curing both fissure and hæmorrhoids and her speedy restoration to health.

I have used no other method in affecting the radical cure of piles for the past eight years, and during that time have succeeded in curing many cases of the most aggravated character. I will not now state the number of cases nor the percentage of cures, realizing that advocates of new methods too often excited distrust by alleging too much. I know of no condition that would forbid application of this treatment. I have applied it at almost every stage of pregnancy, in four hours succeeding labor, in patients suffering from cirrhosis of the liver far advanced, in cases complicated with enlarged and indurated prostate gland, those with urethral stricture—in fact, I know no reason, where it is demanded for relief, why it should not be resorted to. In 1888 Verneuil reported the result of his application of the treatment during the 14 years then just passed. He alleged 98% of cures. He made no distinction in the cases, "both external and internal, old and recent, large and small, those associated with relaxed sphincters and those with the opposite condition." My experience with the treatment has been no less satisfactory than that reported by Verneuil.

The dilatation is affected as follows: Hook the thumb of your left hand and the middle finger of your right hand so as to include both sphincters on opposite sides of the anus and gradually but forcibly separate your hands until all resistance ceases, the object being to paralyze the muscles completely. It is commonly advised to oppose the thumbs, but in a great many cases the resistance will be found so strong that it will be impossible to separate the thumbs a sufficient distance. I have in some cases found the sphincters from long contraction developed to such a degree as to give the impression of pulling on an iron ring. I have never known any bad results follow the procedure. No after-treatment is necessary, except in cases where there is complaint of smarting, which may be relieved promptly by the application of a pledget of cotton saturated with a 4% solution of cocaine. It is always advisable to perform dilatation under the influence of an anæsthetic, the A. C. E. mixture being the one I always use.—Dr. Higgins in *N. Y. Med. Jour.*

WIRE-GAUZE FOR SPLINTS.

Permit me to call your attention to the zinc, wire-gauze splint. This has been for many years a great favorite with me. One who has a little ingenuity can do almost everything with this as a splint.

I consider it the splint par excellence for the country practitioner, and in fact can see no splint which would be better for any surgeon in ordinary cases.

It is made from wire $\frac{1}{16}$ of an inch in diameter, and woven into squares of the size of $\frac{3}{8}$ of an inch across, and is well zinced together.

In going into the country, it is often a matter of conjecture, and sometimes of serious study and misgiving, as to what is necessary to take for a splint. It is not at all convenient, as I have sometimes found, to take a box of felt splints, or splints of various kinds and shapes and sizes, if one is so fortunate as to be so supplied, which is not usually the case. Splints made from pasteboards or wood for the occasion are often unsat-

isfactory, and almost any appliance is likely to be found hot and uncomfortable. Few permit of proper antiseptic dressings without discomfort to the patient or danger to the part, nor do they admit of the easy applications of anodynes or evaporating lotions. The wire-gauze splint fits all sizes of limbs and all portions of the body. Buy a yard or more of the gauze. Get also a small pair of tinner's shears, and you are ready to fit the body with any splint desired. In making, cut the gauze into strips of four or five different sizes. These will be the stock splints. Nip off the protruding where cut through to make smooth edges to the splint. A set of these splints in the rough may be rolled into a bundle and be ready for use as occasion may require.

Bend, and ifover a joint cut through nearly across the splint and put in the angle, wiring the overlapping fragments with small-sized copper wire. Notch out to fit such joints as may be necessary. The flexure in the joint is superior to other solid removable splints; in that the angle can be made at any degree desired. When fitted, place the bandaged limb in the splint in the usual manner. If it is desired, a layer of absorbent cotton may be placed in the splint before bandaging. In case there be an open wound, which is desired to be dressed without removing the splint, nip out a section of the gauze of such a size as may be desired. If deemed not of sufficient strength, the splint may be reinforced by another strip of the gauze.

This splint is light. It is easy to keep on hand and never wares out. It is cool. It is non-absorbent and easily cleaned. I permits the application of liniments and evaporating lotians at the sight of injury as desired. It is easily applied. It is and remains aseptic, and its cost is trifling. Why it has not come into more general use is a mystery to me.—H. W. Coe, M.D., in *Northwestern Lancet.*

THE NEUROPATHIC ELEMENT IN SPASMODIC ASTHMA.—Although the general explanation of the asthmatic paroxysm is that it is due to bronchial spasm, which may often be excited by peripheral nervous irritation—a view that has received much attention of late in respect to the causal relationship of nasal polypi and asthma,—nevertheless there have not been many attempts to demonstrate the existence in the asthmatic of an underlying state of nervous instability. This lacuna is in a measure filled by a paper by Professor E. Brissaud (*Rev. de Méd.*, Dec., 1890), in which he collates a considerable amount of evidence to show that the (true) asthmatic may be regarded as a neurotic; and hence the removal of the supposed exciting cause (e.g., nasal polypi) can hardly be expected to be curative. Indeed in many cases, he avers, the asthma has recurred some time or other after the patient has undergone prolonged treatment at the hands of the rhinologist. The probability of some inherent nervous defect in a disease like asthma, the periodical recurrence of which reminds one of the epileptic nerve-storms, seems so self-evident that it is singular so little attention has been paid to it, even by such a strenuous advocate of the nervous theory of the paroxysm as Hyde Salter, for instance; but the fact is that attention has been fastened too much on its alleged diathetic relationships, and also to the existence of local organic disease, of digestive, respiratory, or generative organs as possible sources of reflex irritation. On the other hand, the association of asthma with insanity and alternation of attacks of the mental affection with those of the respiratory apparatus, has been noted by several alienists, and Professor Brissaud quotes in this connexion the writings of Savage, Kelp, and Conolly-Moore. Cases are given of asthma associated with hypochondriasis, melancholia, and hysteria, or combined with some mental disturbance or other nerve disorder, as neuralgia or epilepsy. The general conclusion is that asthma is only one manifestation of the general neuropathic tendency, and that an inheritance of nervous disorder is a main predisposing factor in the affection. Like migraine, which once was considered in France to belong to the "arthritic" group, but which is incontestibly regarded now as "neurotic," asthma, too, has relationships far more close with the neuroses than with any diathetic state. Of course, it is not implied that in the same subject other nervous manifestations must necessarily occur, even in their slightest form, for this is not essential to any single neuropathic affection. It is only that the asthmatic belongs to the group of neuropaths, and that his special affection may be the sole expression of his alliance therewith. Hence it is explicable how comparatively slight peripheral irritation of sensory nerves—e. g., of the nasal mucous membrane, or odors, or even simple mental apprehension or dread of attacks supervening under certain circumstances—may suffice to induce the asthmatic paroxysm in the individual of nervous constitution. Nor, as stated, can the cure of spasmodic asthma be reasonably expected to invariably occur after the removal of the supposed exciting cause.—*Lancet.*

PANACEA HUNTING.—The medical profession claims and receives the respect of mankind on the plea of basing their action on the observed phenomena of nature. It was that a body of educated scientists, men not to be led astray by every wind of doctine, would be provided for looking after the health of the community, that Linacre asked for and obtained the charter of the physicians. In Italy he had seen the blessing to the people of an

educated body of physicians. He had seen how the popular fallacies and the numerous and disgusting nostrums were gradually but effectually gotten rid of in the great republics of Venice and Florence, and how the citizens of these republics had learned to discard the charlatan and respect the physician. Vicary actuated by the same love of nature that Linacre felt, on the same grounds sought and obtained the charter for the surgeons. The after history of medicine in Enland is a glorious testimony to the enlightened wisdom of Linacre and Vicary. Good results, epoch-making discoveries, soon followed on the careful observation of natural phenomena. The merest tyro knows of Willis, Harvey, Sydenham, Smellie, Denman, William Hunter, John Hunter, James Cheselden, O'Halloran, Chamberlain, Charles Bell, John Bell, Black, Priestly, Cavendish and Waller, and in more recent times may we not add Jacob, Graves, and Stokes? All these great lights of medicine obtained immortality by unremitting observation of nature. Sydenham spent years in the study of the diagnostic characteristics and normal course of the fevers; William Hunter spent years on the study of the womb; John Hunter's life was spent in study; Jacob's accurate and beautiful dissections of the eye tell to all succeeding students of his marvellous patience and perseverance; all who have read Stokes' books know of his extreme caution. From those who thus achieved greatness, we learn that the respect and admiration of posterity can neither be won nor retained except by an intelligent and continuous study of nature. As we read the lives of these great men we may notice their mental stability; they indeed "proved all things," and their lives present an example to those who, "unstable as water, shall not succeed." Indeed, latterly, we have changed all the old lines of conduct. To-day men rush forward proclaiming a panacea for all the ills of life and, in conformity with modern ideas, the only question is, "whence cometh this man?" If the answer is "from Germany," he at once acquires the confidence of the multitude, and to doubt of his accuracy or to hint the desirability of testing the power of his panacea, or the asking some information concerning its nature, incurs the risk of ostracism. Certain of our profession repudiate the teaching of our forefathers—discard caution, close their eyes and ears, and as unreasoning creatures follow a self-elected, leader whithersoever he may go.—*Med Press & Circular.*

On Hot-Water Flushing of the Uterus Directly after Delivery.—In every case of labor I now attend I make it a rule to wash out the uterus directly the placenta has been expelled, either by expression or by the natural efforts, with hot water. The advantages claimed are:—(1) Stimulant to the patient; (2) produces contraction of uterus, removing shreds of membrane, clots, etc.; (3) the prevention of "after pains"; and last, but not least, setting the practitioner's mind at rest by ensuring a permanent contraction of the uterus and a clean and untainted cavity.

The facility with which the uterus can be washed out *directly after labor* is a strong argument in favor of the proceeding. An endeavor to do so forty-eight hours later will be found much more difficult and not nearly so effective.

In several cases which I had observed while assistant master to the Rotunda Hospital, the sudden rise in temperature (sometimes accompanied with rigors) was entirely due to a portion of membrane, or *débris* of some kind being retained *in utero*, discovered only when that organ had been flushed with hot water.

Nothing can be more mischievous than the plan I have seen adopted by many midwives, viz., that of "making a rope of the membranes." Though not condemned as yet by any of the text-books or manuals for midwives with which I am acquainted, the fact of rotating the placenta when extruded (or nearly so) brings on a uterine contraction, and the membranes which have not left the uterus are gripped by the os or cervix. The twisting is continued till the membranes break, leaving a considerable portion behind, setting up after-pains, which, if not sufficient to expel for good and all the offending portion, allow it to become a source of extreme danger to the patient by subsequent decomposition, as shown by the high temperature, rigors, etc.

I am now so convinced of the value of washing out the uterus with plain hot water (*previously brought to boiling point*), that I hope I shall be excused for saying, that, in my opinion, *such should be made a routine treatment in all cases of labor and miscarriage, whether in hospital or private practice.* The little additional trouble involved will amply repay the practitioner who adopts this treatment, by whom alone it should be done in all cases.—Alexander Duke, F. R. C. P. I., in *Hosp. Gaz.*

The Treatment of Syphilis.—Professor Köbner, of Berlin, at the conclusion of a discussion on "The Treatment of Syphilis," gave the following *résumé* of his experience and opinions.

1. Regarding excision of the primary affection, in only a small minority of cases was he able to prevent further symptoms of syphilis by this means. As a method of operation he recommends excision combined with electro-cauterization. It is indicated as a prophylactic only at an early stage of the chancre, and in extensive breaking down of the induration, or, if the latter is obstinate to ordinary treatment, for the purpose of

removing the focus of the disease. The extirpation of inflamed inguinal glands is still more rarely successful and absolutely futile if deeper glands are involved.

2. He does not believe in the preventive treatment of syphilis by mercury, and thinks that the use of the remedy should be limited to hastening the healing of a serious primary sore, and to diminishing the danger of contagion, as in the case of a man with a family.

3. He considers the continuous mercurial treatment of Fournier by no means infallible, and for many cases superfluous, as demonstrated by several cases.

This method should be limited to certain indications, as to impending marriage or grave localization of the disease.

He further calls attention to the destructive influence of mercury on the digestion and on the nervous system.

In harmony with the majority of the specialists who attended the International Medical Congress, he refutes Fournier's statement that syphilis becomes "*presque fatalement tertiaire*" without a saturation of the system for years with mercury.

Mercury alone cannot cure syphilis in a person who was not previously healthy, unless the health is greatly improved by hygienic treatment. Upon the hygienic management he lays great stress.

In several individuals, who could not take mercury by the mouth, the rectal administration proved efficient and safe.—*Berliner klinische Wochenschrift—Medical News.*

PEROXIDE OF HYDROGEN.—Peroxide of hydrogen is a drug which has been gradually and steadily gaining in favor, and which has yielded to each who has faithfully tried it, results so constant and so satisfactory that he has learned to depend upon it. As ordinarily found in the shops, peroxide of hydrogen is a 3.2 per cent. solution, yielding fifteen times its bulk of oxygen. This solution is far more potent than is water charged with fifteen times its volume of oxygen, since in the peroxide preparations the gas is given off in its nascent state and is peculiarly powerful in its chemical affinities.

There is abundant evidence as to the value of the peroxide, from both the clinical and the experimental standpoint. The number of those who have reported excellent results from its use is very large, and to this must be added the testimony of the bacteriologists, who find in this drug a potent and almost immediate germicide. It is devoid of septic properties, its worst effect being, when used in a too concentrated form, to cause some local pain and irritation. It is applicable in all cases where pus is present, and where the discharge is foul and profuse its effect is admirable. In suppurating otitis media, in purulent conjunctivitis, the aurists and ophthalmologists have long prized it as one of their most valuable medicaments. In the sloughing inflammations following scarlet fever and diphtheria the laryngologists place great confidence in its powers. Surgeons, however, in whose work it might drove generally valuable, have been somewhat slow to recognize its virtues. But its use in a great variety of sloughing and suppurating cases, has given results better than those obtained from any other germicide, bichloride of mercury not excepted. Where the discharging area is represented by a surface of granulations, the drug can be applied by means of an atomizer. This enables a small quantity to reach every portion of the infected surface. In the case of a suppurating fistula or cavity the peroxide may be injected by means of a syringe. Immediately following its application to a purulent surface, an active effervescence goes on, and every particle of pus which it reaches is destroyed. Not only this, but the microbes, the active agents of pus formation, are also devitalized, so that a large surface can sometimes be rendered aseptic by one or two thorough applications. Even if this result is not reached, the discharge is greatly lessened, and it is by no means uncommon to see a case, in which the pus had amounted to drachms, so favorably affected that the dressings contain but a few drops of purulent matter.

The strength in which the fifteen-volume solution is used will vary with individual cases. It can be employed without harm in full strength. Where this is painful, one, two, or four parts of water may be added.—*University Magazine.*

DOES SWEET OIL REMOVE GALL STONES.—Most striking results are at times obtained from the administration of sweet oil in cases of hepatic colic. A pint or so of sweet oil (or, in some cases, of other bland oils) is administered to a patient who has been for some time suffering from this form of colic, and some hours later an evacuation of the bowels takes place with the expulsion of numerous green masses believed to be gall-stones. At any rate the patient feels greatly relieved, and may remain free from colic for years. In the Medical Society of North Carolina an interesting discussion arose on a paper presented by Dr. Burbank (*North Carolina Medical Journal*, June and August, 1890), touching the value of sweet oil in this affection. Dr. Burbank stated positively that the green masses referred to are not gall-stones at all; that they are composed of soap (formed from the oil and the alkalies of the bile), of oil which is in excess, and of bile pigments and very small quantities of chlosterin—the latter constitutent forming less than one per cent. of the green masses, whereas it forms seventy or eighty per cent. of gall-stones; that examination, in patients with thin-walled abdomens, proved beyond a doubt

that the gall-stones felt before the administration of the oil were still present after the oil had produced its benign effects. He subjoined a brief account of three cases in which large doses of sweet oil were given. None of them presented any history of hepatic colic, yet the use of the oil was in each case followed by the expulsion of masses dark green and whitish in color. In each of these cases the administration of the oil had been preceded by a dose of calomel. In a fourth case no calomel was given, and no masses were seen in the evacuations. This seems to show that the masses are formed when the oil is met in the intestines by a large quantity of fresh bile.—*New York Med. Rec.*

VARIETIES OF HEPATIC CIRRHOSIS.—Saundry (*Brit. Med. Jour.*), in an interesting article on this subject, recognizes ten varieties: Alcoholic, cardiac or cyanotic, biliary, diffuse syphilitic, gummatous syphilitic, tuberculous, malarial, scarlatinal, rachitic and diabetic.

The alcoholic variety is caused by the abuse of alcohol. It is most frequent in adult males. The symptoms usually complained of are hæmatemesis, or abdominal dropsy; those who present the symptom of ascites are usually without hæmatemesis, and those who have hæmatemesis are usually without ascites. Dyspeptic symptoms are common. The skin is of earthy tint and rarely jaundiced. The spleen is usually enlarged, and the liver diminished in size. Cases of hæmatemesis are without dropsy, because the dilated veins surrounding the œsophagus allow the blood from the portal vein to reach the vena cava without passing through the liver. The liver is small, granular and of an olive color, having bands of connective tissue in the portal canals surrounding groups of acini, and invading them from the periphery. Early and repeated tapping in cases of ascites may indefinitely prolong life if alcohol is abstained from.

The cardiac variety is due to the chronic congestion of the right side of the heart. The liver is enlarged and tender. The cirrhosis begins in the radicles of the hepatic veins. There are often slight jaundice and ascites. The biliary variety he considers due to chronic obstruction of the common duct. Jaundice is the initial symptom; ascites is generally absent. The liver is generally enlarged, and he considers it the best-known form of what is called hypertrophic cirrhosis. The trabeculæ of fibrous tissue surround the single acini. The treatment is palliative, unless the obstruction can be removed by surgical means.

Diffuse syphilitic cirrhosis is caused by hereditary syphilis. The liver and spleen are both enlarged, and the lesion is diffuse. It is best treated with calomel. The gummatous syphilitic form is due to fibrous tracts left by old gummata. The liver is puckered.

The tuberculous variety is little recognized. The liver is enlarged, the trabeculæ surround the lobules, and there is enlargement of the biliary canaliculi, but ascites is absent. In malarial types of this disorder the liver is enlarged. The cirrhosis begins in the portal canals and invades the lobules. There is no ascites. The scarlatinal form is known only to pathologists, and it may explain some large livers found, *post mortem*, in children. There is increase of the fibrous material in the portal canals. The rachitic variety is the cause of much of the gastro-intestinal catarrh in children. The liver is enlarged, and the fibrous material surrounds single acini. The treatment includes calomel and cod-liver oil. Diabetic cirrhosis is little known. There is no ascites. The skin is bronzed, but jaundice is absent. The fibrous tissue is formed about the hepatic radicles.

WHAT IS PAIN?—It was John Hilton, I think, who gave expression of greatest import to a truism in regard to pain, that is well worthy of our remembrance. Indeed, he has so forcibly written upon this subject in his valuable work of "Rest and Pain," that he has been quoted up on this subject more often than any other writer. He declares that "every pain has its *distinct* and pregnant signification if we will but search for it"; that "pain, the monitor, and rest the cure, are *starting* points for contemplation."

In this connection it may not be out of place to consider, but for a moment, something of the nature of pain; its laws of production and conduction; of radiation and reflection, as having direct bearing upon our case.

Buzzard has defined the term pain, "a representation in consciousness of a change produced in a nerve centre by a certain mode of excitation."

Accepting this definition, as we do most as merely a "*working* definition," we observe that it presupposes a knowledge of at least two histological structers, viz. a kind that is susceptible of being excited and conveying impulses, as the nerves and their terminations; and, secondly, structures capable of receiving impulses conveyed by these nerves, viz., *centers*, both of cord and brain. It is to be understood that the cause or place of the irritation of any pain may be located any place between the centers and nerve terminations; but by the "law of peripheral reference of sensations," as it is called, the pain is invariably referred to the peripheral end of the nerve of one or more of its branches. This law is most emphatically and wonderfully observed after amputations, and our surgeons tell of many interesting incidents in this connection.—Beebe, *Lancet Clinic.*

ACUTE TRAUMATIC TETANUS; CURE.—The mortality attending this form of sepis reaches such a high rate that the following case presents

marked interest. The patient was a boy, aged fourteen. The history obtained was that twelve days prior to admission he had trodden upon a wooden plank from which projected a rusty nail, that had run into the sole of his foot. The wound produced was but a slight one, and he returned to his work the following day. A week later he began to complain of severe pain in his leg, which he attributed to the limping he was forced to undergo while the wound was healing in his foot. Another three days elapsed, when he began to have stiffness about his jaws, and spoke, as his mother describes, through his teeth. When admitted on the twelfth day after the receipt of his accident, he showed all the well-marked signs of acute tetanus. Every ten or fifteen minutes, and sometimes oftener, he was convulsed. His whole body became rigid, and his back arched into a typical opisthotonic position; his face also showed the symptomatic risus sardonicus. As each fit came on he cried out and begged to have his abdomen pressed upon. Chloral hydrate, thirty grains, was given every two hours until the patient was seen to be markedly affected by it. In the course of twenty-four hours he received three quarters of an ounce, and was then profoundly under its influence. After a spasm he would fall back into an almost profound slumber. The dose of chloral was reduced in quantity and frequency, the spasms lessened; amount of chloral was decreased, and with any increase in their frequency the drug was increased. Within the first three days of his hospital residence he had no fewer than two hundred and fifteen spasms, having on the second day the largest number, eighty-two. Within this same period he took $1\frac{3}{4}$ ounces of chloral. In all $5\frac{1}{2}$ ounces of chloral were given.—*Glasgow Med. Jour.*

SOME SOURCES OF ERROR IN SOUNDING FOR STONE.—In a recent lecture Mr. Buckston Browne said his first proposition was, that in cases where the prostrate was enlarged, stones are often missed when the bladder is examined, because the sound has not reached the bladder, but is arrested in the prostatic uretha. He illustrated this by several examples, and expressed an opinion that in many cases where the bladder was found contreated and the sound could not be turned, the real truth was that the sound had never entered the bladder. Next he proved that many stones were missed because the post-prostatic pouch is not explored. It was shown that in certain cases it was very difficult to explore this pouch by means of instruments passed in by the urethra, and that in certain other cases it was impossible to do so, and that in these rare cases the only way to thoroughly search was by means of suprapubic incision into the bladder. Several interesting and important cases from the author's personal experience were cited in illustration. The sound described was of solid burnished steel, with a round, smooth handle, a shaft ten inches long and equal to No. 7 of the English scale, ending in a smooth, broad, flat beak, exactly like the end of a broad, flat-bladed lithotrite. The author asserted that the beak of this instrument allowed it to ride easily over the bar at the neck of the bladder, and that it was not caught in one or other prostatic sinus at the end of the ordinary sound was so prone to be, and that when in the bladder it slipped more easily than an ordinary sound under a projecting prostatic middle lobe, and so enabled the surgeon to thoroughly search that favorite habitat of a stone—the post-prostatic pouch.—*Medical Press and Circular.*

KNITTED BANDAGES FOR ULCERATED LEGS.—Staff-Surgeon Pannwitz reports in a German military medical journal the success he has had in the treatment of obstinate chronic ulceration of the leg by using tubular bandages of knitted material. Decided improvement followed the first dressing, and by persevering with these bandages a complete cure was obtained. Ordinary antiseptics may be used at the same time, and of these he prefers iodoform. These bandages were also used in varicose veins and œdema of the leg in the place of the ordinary elastic bandages or stockings, and produced the best results, while even in valvular affections and Bright's disease considerable improvement followed their application. He thinks them sufficiently elastic for the lower extremities, and they do not cause an injurious constriction of the vessels as rubber bandages often do. Uniform pressure prevents a thickening of the margins of the ulcer and existing indurations gradually disappear. The greater porousness of the bandages is often also an advantage, as the function of the skin is not interfered with. The skin never becomes macerated, as is often the case when rubber bandages are applied, as through the great permeability of the knitted material part of any liquid discharged may be evaporated. The bandages are also easily cleaned and disinfected, and do not lose their elasticity for some time.—*The Lancet.*

A NEW METHOD OF EXAMINING SPUTUM FOR TUBERCLE BACILLI.—Dr. Biedert, of Hagenau, in Alsace, has devised a new and considerably surer method for the discovery of tubercle bacilli in sputum. He collects a tablespoonful or more of the sputum, mixes it well with a glass rod, takes some of it and stirs it together with two tablespoonfuls of water and four to eight drops of solution of caustic soda according to the density of the sputum, and then boils it, stirring it the while in a shallow cup, gradually adding four to six tablespoonfuls of water till he gets a pretty thin fluid mass. This he allows to stand for two hours in a high glass tapering as finely as possible downwards, and all the formed particles sink with the tubercle

bacilli to the bottom. Then he pours off the fluid, retaining the sediment, parts of which he takes out with a platinum needle and rubs them fine on a cover-glass. When the preparation is dry he passes it through a flame, stains it with a carbolised solution of fuchsine, and then bleaches it with 25 per cent. sulphuric acid. If there are any tubercle bacilli they remain red, and are thus distinguishable under the microscope. Even a single bacillus is discoverable in this way, whereas the older methods yielded a positive result only if there were many.—*The Lancet.*

HOT WATER IN ACNE OF THE FACE.—Hot water applied twice or three times a day for about five minntes is one of the most reliable local remedies which we possess for the treatment of acne of the face. To derive the full benefit from the effects of this simple remedy, it is necessary that the physician, and through him the patient, should be thoroughly familiar with the proper method of using it. The water should be very hot, so hot, in fact, that it can hardly be borne by the patient. Care should of course be taken not to scald the face, but if the water is only warm instead of really hot, more harm than good will be produced. The face should not be washed, rubbed or bathed with hot water, as is so frequently done, but a small portion of the diseased area of the face should be soaked with it for a very short time only. The heat of the water which is brought in contact with the skin is deeply dissipated for a moment and causes an intense but transitory local hyperæmia. This is exactly what we want to produce. If the hot water is allowed to act on the skin for too long a time, say more than a minute, or if the application is renewed at two short intervls, an acute inflammatory condition is added to the disease already existing. It is sufficient to go over the effected parts twice in one sitting, and the entire operation need not take more than three to five minutes. A handkerchief or a piece of soft linen is commonly used to convey the hot water to the face. I use for this purpose a very small glass holder, which I have constructed. Since this little instrument, which I have named "Thermophor," has proved itself very useful and convenient, I shall take the liberty of shortly describing it here. The instrument consists of handle and head. The later is nothing else than an ordinary test tube. About half of this test tube is filled with cold water. A thick pad of absorbent cotton is thickly stuffed into the opening of the tube. The holder is then reversed, and the water inside the tube allowed to soak the cotton. The latter is thus kept in place by dint of the weight and adhesion of the water. During these few preparatory steps water has been brought to the boiling point in a small vessel on a stove, or over a gas or alcohol lamp. The holder with cotton is dipped into hot water, left in it for a few minutes and then carefully carried to the affected portion of the face. The advantages of the "thermorhor" are manifold. It saves the patient's hands from coming in contact with the hot water; it renders possible the use of water of high temperature, and makes it easy to confine the action of the heat to a limited portion of the deceased area. Besides, it is clean, handy and cheap. Not only plain, but also medicated hot water may be used in the manner described above. Hot solutions of boric acid, bicarbonate of soda, salicylic acid, resorcin etc., are all very serviceable. I have had excellent results from the so-called "lotio alba," to which resorcin is added, according to the following formula:

℞.—Zinc. sulf.
Potass. sulfuret., ... āā ʒj.
Aq. rosar., ... ʒiv.

Dissolve each of the ingredients in water, mix and add resorcin, ʒj.

S.—Lotion. Shake well.

This lotion is to be used hot at night and cold in the morning.—Frederick J. Leviseur, *N. Y. Med. Rec.*

TREATMENT OF HÆMORRHOIDS BY DILATATION OF THE SPHINCTER ANI.—Dilatation of the sphincter may not in a surgical sense, be worthy of the name "operation." If such is the case, I advise the "family doctor" to appropriate it, for, with the multiplied and multiplying specialities devoted to diseases affecting all organs and tissues between the fields of the alienist and chiropodist, inclusive, there is a very limited territory in which he may practice. My confidence in the superiority of treatment by dilatation was secured by the same nature of accident which convinced the French surgeons—that is, by observing the complete and permanent disappearance of a number of large internal pile tumors in the case of a gentleman who, in connection with his other trouble, developed an anal fissure, dilatation for the cure of which also cured his hæmorrhoids.

The dilatation of the sphincter is as follows: Hook the thumb of your left hand and the middle finger of your right so as to include both sphincters on opposite sides of the anus and gradually but forcibly separate your hand until all resistance ceases, the object being to paralyze the muscles completely. It is commonly advised to oppose the thumbs, but in a great many cases the resistance will be found so strong that it will be impossible to separate the thumbs a sufficient distance. I have in some cases found the sphincters from long contraction developed to such a degree as to give the impression of pulling on an iron ring. I have never known any bad resultes follow from the procedure. No after-treatment is necessary, except in cases where there is complaint of smart-

ing, which may be relieved promptly by the application of a pledget of cotton saturated with four per cent. solution of cocaine. It is advisable to perform dilatation under the influence of an anæsthetic, the A. C. E. mixture being the one I always use.—*New York Med. Jour.*

ON THE ACTIONS OF THE SIMPLE BITTERS.—The use of bitters as remedial agents are based upon the four following actions :—

1. They increase secretion.
2. They increase peristalsis.
3. They diminish fermentation ; and, they do this not only by their antiseptic action, but, very likely, partly on account of the increased digestion, so that there is not left so much material to ferment, and also by hastening on the material into the duodenum that it does not have time to remain in the stomach and ferment.
4. They increase absorption.

From the above actions you can readly deduce the conclusion that wherever there is diminished secretion, wherever there is diminished peristalsis, wherever there is undue fermentation, wherever there is sluggish absorption, that these drugs may be indicated and may be of service.

Hence, in atonic dyspepsia, where the mucous membrane is pale and inactive, bitters are of great service by increasing secretion and peristalsis. The same is true of the sluggish digestion that occurs in convalescence from acute disease ; especially is this true of the emaciated typhoid patient. It is also of use in chronic gastric catarrh. It is not only of use to increase the action of the stomach, but in diarrhœa, due to relaxation of the mucous membrane, by increasing the tonicity of the various structures of the membrane, the diarrhœa is often improved. It is also of service where there is habitual accumulation of flatus, because it increases peristalsis, and removes the accumulated material and arrests fermentation, so that it will not be formed.—*N. Am. Practitioner.*

TREATMENT OF FISSURED NIPPLE AND ENGORGED MAMMARY GLAND.—In the treatment of fissured nipple, when the cracks are at all extensive, the ordinary remedies recommended from time to time have been found more or less unsatisfactory. Painting with tincture of benzoin, for instance, while an excellent procedure for small superficial cracks of the nipple, is perfectly worthless in more advanced cases.

The writer has found in hospital and private practice that excellent results can be secured in bad cases by the application of an ointment made up of equal parts of castor oil and subnitrate of bismuth. This mixture makes a very smooth, soft ointment, which relieves the pain, and is an excellent protective to the part. Before application, the nipple and surrounding skin should be carefully cleansed and disinfected, and then the ointment should be smeared on plentifully. If it is necessary for the child to nurse from the affected nipple, it can be allowed to do so without the necessity of removing the ointment from the nipple, as must be done if tannic acid or the salts of lead are used. This is a serious disadvantage of many forms of treatment recommended for fissured nipple, for the irritation of removing the substance employed as a local sedative neutralizes its action.

For the engorgement and pain in the mammary gland itself, which so often accompanies fissured nipple, the writer has had excellent results from the use of an application of lead water and laudanum, which is applied by means of a cloth covering the whole breast, renewed at frequent intervals, and kept in place by a suitable mammary binder, either that recommended by Richardson or the Murphy bandage. This not only retains the dressing, but supports the breast and exercises even pressure upon it. With this treatment the development of mammary abscess is a rare event. If the child can be nursed from the other breast alone it is safer, I think, to draw the milk from the affected gland by means of a breast-pump until the cure is almost complete. If it is necessary that the child should nurse from the cracked nipple, a glass nipple shield with a rubber tip must be employed.—B. C. Hirst, M.D., in *Univ. Med. Mag.*

AFTER PAINS.—Dewees is authority for the following rules for the prevention of after-pains :

1. Do not rupture the membranes before the neck is completely dilated.
2. After the head is born make no traction, but allow the uterus to expel the shoulders and trunk.
3. Do not extract the placenta until the womb is thoroughly contracted.
4. After the placenta is delivered, excite the womb so as to oblige the muscular fibres to contract as much as possible.

Leishman says : "Nothing does so much to prevent their being severe as pressure outside upon the womb during the expulsion of the child and placenta, thereby producing firm contractions." When traction is made upon the cord before the placenta has been expelled from the uterus, the placental vessels are often torn and bleed, and thus a clot is formed. Efforts to deliver the placenta should be directed to producing contractions. These will expel it without leaving a clot ; then by continuing to grasp the womb through the abdominal walls, should it soften, the fact should be recognized, and efforts made to prevent relaxation. This can be done with one hand and the placenta removed from the vagina with the other.—*Med. Summary.*

POSTURE IN TREATMENT OF NOCTURNAL INCON-

TINENCE IN CHILDREN.—Dr. van Tienhoven suggests that in this condition though the bladder act normally through the day, it misbehaves at night. He believes that the vesical sphincter is not strong enough to keep back the urine which collects in the bladder in the early hours of the night and permits it to find its way into the prostatic portion of the urethra. The detrusor vesicæ is thus reflexly stimulated and the bladder emptied. In order to prevent the urine from running into the urethra in this way the children were made to sleep with the pelvis elevated. In this position the bladder is capable of holding a certain amount of urine before the liquid reaches the level of the urethral opening. The foot of the bed must be elevated so that the bed forms an angle of forty-five degrees, with the horizontal. The children should be sent to bed with empty bladders, and should not take any liquid just before retiring. They sleep well in this position and do not complain. Fourteen cases were treated by this simple method only, and all were cured in a short time.—*Schweizer Aerzte.*

CYSTITIS.—One of the commonest ailments among women which the general practitioner is called upon to treat, and which seems to be peculiarly prevalent in this class of patients, is a troublesome cystitis, due possibly to derangements of the pelvic circulation. Not rarely a very considerable amount of difficulty is experienced in overcoming the affection, which not only disturbs the rest of the sufferer, but often also very seriously affects her mental state, causing her to be irritable, nervous, and a source of discomfort to all around her. For the treatment of such cases, resort has been had to innumerable remedies, and success has been claimed in this connection for the most dissimilar drugs and methods. Most frequently the cause of the distress is a vesical catarrh, the cure of which affords more or less complete relief of the condition. At other times the treatment which is found to be called for is constitutional rather than local; and cases are also met with that necessitate a union of both procedures. To this probably it is attributable that the recommendations of different practitioners cover so wide a range of ground; while it explains, too, the reputed success of those who claim to have met with good results from the employment of medicines newly introduced into the Pharmacopœia. The drug most lately reported as being curative of the form of cystitis in question is salol; and three obstinate cases which were completely cured by its administration are described by Dr. Abbot in the *Boston Med. and Surg. Jour.* Each of the patients had been suffering for a considerable time, and had been treated with palliative means with more or less success, but without any permanent relief being obtained. The dose of salol given was 10 grains three times a day, and in each, marked improvement of the symptoms was very speedily observed. One most satisfactory feature in the history is the rapidity with which the cure was effected, a week or ten days sufficing to bring it about in all three instances. When we remember that even months of treatment by other means may terminate in disappointment, it may well be considered that a method which promises so favorably deserves the widest possible trial, and no doubt the usefulness of the drug in question will soon be tested on a larger scale than has hitherto been the case.—*Medical Press.*

DIET FOR DIABETICS.—Arranged by Bransford Lewis, M.D., Lecturer on Genito-Urinary Diseases, Missouri Medical College, St. Louis.

ALLOWED.

All kinds of meats (except liver). Poultry, all kinds of game.
All kinds of fish, fresh or salt, sardines.
Oysters.
Eggs in any style (without addition of flour, starch or sugar.)
Fats and fatty meats
Butter, cheese.
Soup (without flour or the prohibited vegetables.
Celery, cabbage, cauliflower, string beans, asparagus, lettuce, spinach, mushrooms, radishes, cucumbers (green or pickled), young onions, water cresses, slaw, olives, tomatoes.
Graham bread, rye bread. Occasionally stale light (white) bread.
Acid fruits, such as oranges, lemons, apples, plums, cranberries, currants, cherries, strawberries, gooseberries (sweetened, not with sugar, but with saccharine and sod. bicarb.)
Gelatine (without sugar.)
Almonds, walnuts, Brazil nuts, hazel nuts, filberts, pecans, butternuts, cocanuts.
Salt, vinegar, pepper.
Drinks: Coffee, tea (without sugar), skim-milk, cream, soda-water, (without syrup), mineral waters of all kinds, but especially vichy.
Claret, Rhine wine.

PROHIBITED.

Liver.
Sugar, in any form.
Starch, in any form.
Sauces containing flour, sugar or starch.
Cakes of all kinds.
All cereals, such as cracked wheat, oatmeal, mush, cerealine, etc.
Potatoes (either Irish or sweet), corn, carrots, turnips, homing, parsnips, beans, peas, beets, rice.
White bread, corn bread, white biscuits.
Pears, peaches, grapes.
Sweet jellies.
Chestnuts.
Malt Liquors, beer ale.—*St. Louis Med. Herald.*

IPECACUANHA IN LABOR.—While the accelerating action of ergot in cases of lingering labor is universally known and acknowledged, there is another drug which, so far as I am aware, is not noticed in works on midwifery, and which yet is capable in such cases of rendering signal service;

I allude to ipecacuanha. Not only in cases of rigid cervix, where possibly it might be considered to act in a similar manner to antimony, but in cases of simple inertia, in either first or second stage, it is a potent instigator of uterine contraction.

In the course of general practice extending over many years I invariably carried a bottle of vinum ipecacuhanæ in my midwifery bag, and rarely, if ever, gave a dose of ergot in the first stage of labcr. Time after time on coming to a confinement case where the pains have been feeble and inefficient, or had totally ceased, two or three 10 or 15 minim doses of the wine at intervals of ten minutes have been followed in a surprisingly short time by energetic uterine action, with a rapid termination to the labor. It never produces the quasi-tetanic contraction so often met with as the result of ergot, the pains continuing to recur regularly, just as they do in natural labor, but with greater force and at shorter intervals. Conviction of the value of the drug for this purpose induces me to give my experience of it, believing that its merits will be recognized by any who choose to give it a trial.—*Brit. Med. Jour.*

FRACTURES OF THE FEMUR IN CHILDREN.—Much use is made here of perpendicular extension in treating fractures of the femur in children. The ordinary plaster strips are bandaged to the limb, but instead of the cord which attaches the weight passing horizontally over a pulley at the foot of the bed, it passes perpendicularly over one directly above the patient's pelvis, thence horizontally to a second, and then to the weight. This latter is just sufficient to raise the buttock of the affected side clear of the bed. The whole limb and half the pelvis is thus swung at right angles to the trunk. Thus defecation can be easily managed and perfect cleanliness secured. No coaptation splints are employed, and no device for preventing rotation. It is found that a muscular equilibrium is quickly established, which prevents inversion or eversion. Results are excellent.—*Correspondence in Med. Rec.*

SULFONAL FOR NIGHT-SWEATS—(*Therap. Monatschaft; Memorabilien*). Boettrich gave a woman, eighty years of age, four grains of sulfonal as an hypnotic. After using one powder she asked him if its virtue consisted in the abatement of night-sweats. She suffered so profusely from this trouble that she had been compelled to change her linen twice every night. After the fourth dose of sulfonal great improvement was noticed. Further observation proves to the writer that 0.50 (seven and one half grains) was generally successful in the prevention of night-sweats. Boettrich thinks its effects equal to those of atropine, and it possesses the advantages of freedom from disagreeable after-effects. It retains its power, as he finds that the night after taking a dose the sweating is decidedly less.

WHERE TO PUNCTURE IN PARACENTESIS.—Prof. Keen selects the following points for the passage of the needle in the operation of paracentesis. In paracentesis thoracis the place of election is beteween the eighth and ninth ribs in the line of the axilla. In paracentesis abdominis the needle should enter in the middle line, the patient being in a sitting posture, and the bladder having been previously emptied. paracentesis pericardii the patient should be in the recumbent posture, and the needle should enter at the fifth interspace in in front, due regard being had for the heart and large vessels.—*Col. and Clin. Rec.*

TREATMENT OF LARYNGEAL SPSAM.—The treatment of spasm of the glottis is often difficult and uncertain in its results, but Sir Morell Mackenzie writes that by setting up a rival reflex the laryngeal spasm may be instantly overcome. The patient need only take a pinch of snuff or black pepper into the nostrils, or if neither can be obtained, the nares should be tickled by a feather. The immediate result is a paroxysm of sneezing, after which the breathing is relieved.—*Hospital Gazette.*

I. N. LOVE, M. D., Professor of Diseases of Children, Marion-Simms College of Medicine, and editor of the *Medical Mirror*, says: The subject of uterine disease reminds me that during the past six months I have had my attention drawn to a remedy which goes under the name of DIOVIBURNIA. I was not familliar with the component parts, but having read the emphatic endorsement by Drs. J. B. Johnson and L. Ch. Boisliniere, of St. Louis, two of the most eminent professors and practioners of the city, as well as that of Dr. H. Tuholske, I was induced to give the compend, a fair and thorough trial, and I am convinced that in DIOVIBURNIA we have a valuble addition to our armentarium in the battle againt the enemies of the noblest work of God—Woman.

JOHN MUIR, M. D. Member College Physicians and Surgeons, Ontario, Canada, Ex-Vice-President Ontario Medical Council, says: "I take pleasure in saying that I have found Papine (Battle) prompt, efficacious, and—better still—unobjectionable as to after effects. A patient, more than usually intolerant of other preparations of opium, has borne it well, and derived manifest benefit from its use."

THE world do move! England is beginning to ask why she cannot have lavatories on her railway carriages.

THE CANADA LANCET.

A Monthly Journal of Medical and Surgical Science Criticism and News.

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AGENTS.—DAWSON BROS., Montreal; J. & A. MCMILLAN, St. John, N.B.; GEO. STREET & Co., 30 Cornhill, London, Eng.; M. H. MAHLER, 23 Rue Richer, Paris.

TORONTO, APRIL, 1891.

The LANCET has the Largest Circulation of any Medical Journal in Canada.

IMPROVEMENT IN THE CHARACTER OF THE MEDICAL PROFESSION.

In Canada it is especially desirable to raise and keep raised the character and tone of the medical profession. There are innumerable ways and practices by which the tone of the profession can be lowered, but to proceed in the opposite direction is more difficult. No one can review the tendencies of modern times and their effects upon the practice of medicine without entering a strong protest against certain modern practices: that of contract work in lodges is perhaps the most pernicious, certainly it is the most general. In this class of practice the regulations which govern ordinary practitioners are overruled, the fees are cut down to the merest pittance and the physician himself made to feel under obligation to the "noble viziers" and tin-capped aristocracy who, by their great influence in the "*lodge*," have succeeded in securing his election as its physician; whereas, in truth, the doctor is the source of benevolence, by whose labors alone such organizations are able to exist. Is it not a lamentable fact that educated and able physicians of refined feeling allow their names to be put in nomination for the office of lodge doctor, in opposition to some other local physician? If asked the reason, the reply is that practice is poor and they are forced to do it.

Another growing and equally pernicious tendency is to engage as the physician to the shop girls of some cheap bazaar, for a certain sum per annum, whilst the selfish employer of such labor deducts so much per week from the hands' pay towards the allowance of the physician and thus a profit is made out of the doctor's work. In Toronto we know such things to exist, and worse: that certain physicians living in large houses accept fifty cents as their consultation fee and give therefor, together with professional advice, a receipt in full for its payment. Is it to be wondered at, if the young physician, experiencing so many difficulties in obtaining an introduction to practice, should be led by such example to unprofession acts: to advertise "Consultations free," or, just now, to introduce into the public press the startling notice that "through the personal influence of Lord Stanley, Sir Charles Tupper, Sir John A. Macdonald, The Dominion Government, Lord Salisbury and the Lord High Chancellor of England, he has secured a supply of Koch's lymph for use in his '*own*' private practice." Enough of the evil. What is the remedy?

To raise the character of the whole profession of the country cannot be the work of any *one*, but rather the result of the concerted action of all its best members. When we enquire into the influences by which men have been prompted to enter the medical profession, the circumstances are not so surprising.

Notwithstanding the advancements made in medical teaching, the fees for the medical course have remained almost the same, or with but very little increase for the last ten years. If the cost of attending medical lectures could be increased to double what it is at present, the effect in reducing the number of students and lessening the evils of overcrowding in the profession would be apparent. If the colleges in Canada would combine to bring the lecture fees as nearly equal to those of the colleges of Europe as are the lectures themselves, the change would be beneficial on all sides.

FOR DIABETES.

Sulphonal is the latest drug in the market for diabetes. If the pathology of the affection be considered, it will be difficult to understand how any of these new compounds can do other than exert a temporary influence upon that undue excretion of sugar. Antipyrin certainly did, in one case

under our observation, notably diminish and, for a few days, absolutely remove all trace of sugar from the urine of a diabetic, who had been suffering for years from the disease, and whose urine contained, at the time of the experiment with antipyrin, 39 grains of sugar to the ounce. But its good effects, like those of all other known remedies, were fleeting, and in a few weeks the old story was told only too plainly and disappointingly by Fehling. It may be stated, that the same patient, a gentleman of education and intelligence, wearied of the futile attempts at cure, by the medical profession, went over to—shall we say the majority—and tried Warner's Safe Cure Pills and Safe Cure, with more benefit to his general health than from any of the previously tried remedies, and *that* having at last failed, *mirabile dictu!* to cure the disease, he his now doing well on Mother Seigel's Syrup.

This is what Dr. Casarelli, of Pisa, says as to the favorable action of sulfonal in diabetes. The drug diminishes the quantity of sugar in the urine, also reducing the polyuria and the thirst. These results were obtained by doses of from 5 to 30 grains per diem, but not to so marked a degree as with doses of 45 grains continued for several days. The 30-grain doses could be administered for some time without any ill effects; but although the 40-grain doses at first caused no disturbance, it was found that, when they were continued for any lengthened period, they caused giddiness and excessive sleepiness, which disappeared when the drug was discontinued.

To simply enumerate the remedies which have gone the rounds of the medical press during the past five years for the cure of this disease would, we think, astonish the profession, and yet we can vouch for the fact that in the case mentioned, the patient did improve more under the quack remedies, than under the use of several of the best endorsed remedies of the profession. Until the pathology of the disease is more definitely known, the empirical use of new remedies can hardly be expected to produce anything but disappointment as to successful treatment.

Dr. L. Webster Fox has been appointed ophthalmic expert to the Board of Pension Examiners of the Philadelphia district.

CONSERVATIVE TREATMENT OF ADHERENT BUT FUNCTIONALLY ACTIVE OVARIES AND FALLOPIAN TUBES.

In a very interesting paper in the *Lancet* of Feb. 21st., A. C. Butler-Smythe gives the results of five cases in which the conservative plan of freeing adherent tubes and ovaries was adopted. In all the cases the results were most satisfactory. The operation will commend itself to every medical man who has not a craze for "removing" these organs. There can be no doubt that there are thousands and tens of thousands of "emaciated creatures, racked with pain and often confined to bed," who would welcome the conservative or minor operation, when no amount of argument on the part of their medical advisers would induce them to submit to the total loss of the ovaries and tubes. Mr. Smythe says it is not his intention to discuss the treatment of cases in which the organs are diseased, nor does he wish anyone to imagine that he advocates attempting to save those organs where they are completely matted together or embedded in inflammatory tissue. "But," he says, "there are many cases where, on opening the abdomen, the operator finds that the ovaries and tubes are only partially adherent, and where no visible or tangible signs of disease can be discovered in these organs. Moreover, it is not always easy to decide, even when the abdomen is opened, whether an ovary is healthy or not. It appears to me that not infrequently it is the presence of adhesions of the ovaries and tubes, and this alone, that is the cause of the pain and other symptoms which have been complained of, and which have led to an intra-abdominal examination of the parts. Simple adhesions of these organs are not dangerous to life, nor do they necessarily destroy the functions of the ovaries and tubes. Why, then, should these organs be extirpated? The removal of the ovaries and tubes for such adhesions has always seemed to me an unnecessarily severe, almost an unwarrantable, proceeding; and I feel confident that the profession will welcome as an important improvement any method by which the conditions under consideration may be cured without resorting to such extreme measures. I hold that in such cases the separation of the adhesions and freeing of the ovaries and tubes can be accomplished, and is frequently sufficient to restore the patients to

health, and, what is more to the point, the operation leaves them with functionally active organs. This treatment seems to me a most rational one, and I have operated in this way on three occasions, the results being most encouraging. I therefore venture to lay them before the profession, in the hope that the operation may be given a more extended trial. I am quite aware that the results of three cases are insufficient to prove the worth of this treatment; but I am convinced that in other hands than mine the operation will be productive of much good. However, if it but tends to limit the number of 'spaying' operations, I shall be more than satisfied."

The only apparent difficulty encountered in any of the cases was hæmorrhage, and this was not alarming, and was apparently readily controlled by "packing sponges down over the abraded surface." The possibilities of this simple operation are great, and we have little doubt that it will soon be generally practised.

DR. G. STERLING RYERSON has returned to practice after a two months' sojourn in Jamaica.

MEDICAL AND SURGICAL BRIEFS FROM NEW YORK HOSPITALS.

INFANT FEEDING.

There is a physiological limit to the amount of food which a child may take. When this principle is violated many morbid processes may result. In the treatment of disease, authors not infrequently speak of removing the cause. Now would it not be wise, in any case, to regulate the quantity of food, for its prophylactic if not for its immediate effects? How to so regulate the diet of children has been the question. A table for this purpose will be given at the end of this note which the intelligent reader will doubtlessly find definite and practical. The need for such a guide is apparent. It will be of special value in diseases of the intestinal tract, for so-called "bottle-fed" children, for those whose power of assimilation is impaired by over-feeding, and for many other disorders hitherto ascribed to teething. Much discussion has arisen concerning the basis of such a table. Prof. Seibert, the originator of this table, makes the weight of the child (naked) the proper

HOW TO FEED AN INFANT.—DEVISED BY A. SEIBERT, M.D.

WEIGHT IN POUNDS.	SIZE OF BOTTLE.	AMOUNT			TIME OF FEEDING.			
		OF MILK.	OF GRUEL.	OF SUGAR.	HOW OFTEN.	IN 24 HOURS	6 AM to 6 PM	6 PM to 6 AM
6, 7 and 8	3 ounces.	1 ounce, or 2 tablespoonfuls.	2 ounces, or 4 tablespoonfuls.	½ teaspoonful.	1 bottle full every 2 hours.	8 bottles.	6 bottles.	2 bottles.
9 and 10	4 ounces.	1½ ounce, or 3 tablespoonfuls.	2½ ounces, or 5 tablespoonfuls.	½ teaspoonful.	1 bottle full every 2 hours.	8 bottles.	6 bottles.	2 bottles.
11, 12, 13 and 14	5 ounces.	2½ ounces, or 5 tablespoonfuls.	2½ ounces, or 5 tablespoonfuls.	¾ teaspoonful.	1 bottle full every 2½ hours.	7 bottles.	5 bottles.	2 bottles.
15 and 16	6 ounces.	3½ ounces, or 7 tablespoonfuls.	2½ ounces, or 5 tablespoonfuls.	¾ teaspoonful.	1 bottle full every 2½ hours.	7 bottles.	5 bottles.	2 bottles.
17 and 18	7 ounces.	5 ounces, or 10 tablespoonfuls.	2 ounces, or 4 tablespoonfuls.	1 teaspoonful.	1 bottle full every 3 hours.	6 bottles.	5 bottles.	1 bottle.
19 and 20	8 ounces.	All milk and 1 teaspoonful of sugar.			1 bottle full every 3 hours.	6 bottles.	5 bottles.	1 bottle.

Never use a larger bottle than the one indicated by the child's weight. The WEIGHT, not the *age*, of the infant determines its food properly.

guide to the amount of food. The author does not claim that the exact quantity can be prescribed; nor is it necessary, since nature has provided the child with the power of enduring limited deprivations and excesses. We may be sure then that a table founded on experience obtained from a very large number of cases, will give and does give genuine satisfaction. It will certainly be appreciated in the absence of any other.

Dr. Seibert insists that the bottle used shall not exceed the one indicated by the child's weight as given in the above table, as he holds that the *weight*, and not the *age*, should determine its food proper.

DIPHTHERIA IN CHILDREN.

From Prof. Winters and others, I got the following ideas relative to the treatment of the above affection:

℞.—Tr. ferri chlor., ... ℥ js.
Glycerini, ... ℥ iijs.
Sig.—℥ j. every hour.

For a child from three to five years:

℞.—Tr. ferri chlor., ... ℥ j.
Kali. chlor., ... ℥ js.
Glycerini, ... ℥ ij.
Sig.—℥ j. every hour.

Burn a sulphur candle for ten or fifteen minutes every hour. Though disagreeable to the nurse, the sulphur process will increase the secretions and make breathing and swallowing easier.

Oil of eucalyptus ℥ js., and water O ij., are heated in a croup kettle. The steam is inhaled for ten minutes every hour. A hot poultice of flax seed, covered by a dry flannel, is applied every half hour to the throat under and behind the jaw. Over the poultices oiled silk is placed to retain the warmth and moisture.

Heart failure is greatly to be feared, even after apparent recovery. To avoid this, the recumbent position is advisable until absolute recovery takes place. This same care should be taken in mild as well as in severe cases, the patient remaining in bed till the pulse becomes normal.

Calomel in ¼ gr. doses is given to promote regular evacuations of the bowels. The use of iron is necessary, and to obtain the best results it must be given in large doses every hour, both day and night, awakening the child, if necessary.

Stimulants should not be given early in the disease, as they would be less effective when most needed. They should be used without limit when the pulse is slow and irregular and the secretions begin to fail.

For a child of two years:

℞.—Sp. frumenti, . . . ℥ js. to ℥ iij.
Sig.—Every hour.

The stimulant should be given with food. Concentrated nourishment, in the form of artificially digested food, may be introduced into the rectum. Prof. Siebert claims immediate and almost specific results from the injection of chlorine water (1 in 150) into the tonsils or sides of pharynx by means of hypodermic syringe. He uses ice packs, instead of the poultices, and mercurial ointment externally. In using the chlorine water, from two to five drops are injected. Its action is local. Acetic acid is now receiving some attention for this disease. In an experiment lately demonstrated in the Polyclinic in regard to the therapeutic value of chlorine and acetic acid, conclusive results were obtained. Blood serum and gelatine (after Koch's method) were used as a cultivating medium for the microbes. This was placed in three test tubes. A piece of diphtheritic membrane obtained from the pharynx was divided into three parts. One was dipped into the gelatine preparation just as it was; the second piece was first placed for two seconds in chlorine water; while the third was for the same length of time in a 5 % solution of acetic acid, both being then placed in the gelatine. Microbes developed only in the first tube, showing the power of the chlorine water and acetic acid as antiseptics. Peroxide of hydrogen is recommended by Drs. Major of Montreal, Elder, of Seaton, Ill., and Hope, of New York. It may be used in full strength. It is perhaps best used in the form of a spray. It possesses the following advantages (1) it is not poisonous and may be taken into the stomach; (2) it gives no offence to taste or smell; (3) It is antiseptic and deodorant; (4) It dissolves the false membrane; (5) it is not incompatible with other remedies.

In treating diphtheria it is usually granted that it is bad practice to remove the membrane by force, so leaving a raw surface open for infection already present.

DIAGNOSIS AND TREATMENT OF METRORRHAGIA.—In a paper read before the British Gynecological Society, Edis (*Br. Gyn. Jour.*) lays special stress, says the *Univ. Med. Mag.*, upon the exclusion of constitutional conditions in the diagnosis of uterine hæmorrhage. Such conditions may arise from heart, liver and kidney disturbance, especially in the menorrhagic chlorosis of young girls and in climacteric floodings. Among the various local causes of metrorrhagia he considers one of the most frequent to be, retained products from incomplete abortion, and refers to a dual cause often producing bleeding which is obstinate and excessive, owing to its added character. This he exemplifies by a villous degeneration of endometrium added to a previously existing intra-mural fibroid.

The treatment of metrorrhagia, or menorrhagia, is divided into the constitutional and local. The constitutional condition requires the administration of cardiac sedatives, cholagogues, diaphoretics and purgatives; and in menorrhagic chlorosis, potassium bromide during the periods, and iron and strychnia between them. Where local cause exists, he advises immediate exploration and removal of cause, avoiding tampons. Where there is retained placental tissue the curette must at once be used if there is severe hæmorrhage or offensive discharge. Of the few reliable remedies to check uterine hæmorrhage, ergot, hydrastis canadensis and hamamelis are the most efficient, with quinine and strychina in systemic depression, and digitalis and iron in heart cases, and in myoma. The use of ergot is always to be avoided when there is any foreign body in the uterine cavity.

In the discussion which followed the reading of this paper, Fancourt Barnes spoke of retained placental tissue as a frequent cause of uterine hæmorrhage, and advised removal, using the finger as the safest curette, followed by thorough application of a solution of iodine. Hugh Fenton suggested electricity, the continuous current, in obstinate cases. Heywood Smith advised the application of the solid nitrate of silver, after curreting for retained membranes, and spoke of a case in which, in the treatment of a fibroid, the continuous current had started a hæmorrhage. Inglis Parsons favored hot douches where no cause for hæmorrhage could be found. The positive electrode he considered superior to ordinary caustics. Bantock laid stress upon the use of saline aperients, and iron and ergot in younger subjects. In cases where there was retained placenta and pyæmia developing, he advised the administration of muriate of iron every two or three hours. He spoke of large doses of ergot frequently increasing hæmorrhage when ten minim doses diminished it.

ELEVATION OF THE PELVIS IN ABDOMINAL SECTION.—Dr. Leopold has performed (*Central fur Chir.*) all his abdominal sections recently with the patients' hips elevated. The patient is placed horizontally on the operating-table, with her hips and legs over a flap. When she has been brought under the influence of the anæsthetic the flap is raised, and is kept at the desired angle by the same contrivance as in an ordinary bed-rest. The intestines then fall anatomically toward the diaphragm, the pelvis becoming free of them. No troublesome prolapse of the gut through the abdominal wound during imperfect narcosis can occur. A large flat sponge is placed over the intestines to guard them, and thus eventration of some coils of gut, in order to explore puzzling conditions in the pelvis, becomes needless. The pelvic organs can be seen with ease; the promontory of the sacrum comes into view. The sewing up of a large peritoneal wound after removal of a uterine fibroid can be managed with comparative ease. The by-standers can see all the area of operation. As the operator can get so deep a view of the pelvis, there is no fear of clots or pools of pus and sanies being left behind. The ureters and other structures passing over the brim of the pelvis can be seen; this is often impossible when the patient lies flat on her back. The flap is lowered when the superficial sutures are applied to the abdominal wound. The elevation of the pelvis did not prove prejudicial to patients. Dr. Leopold finds so many advantages in this position that he always operates in severe cases after the new fashion, which was originally recommended by Trendelenburg. The patient's right thigh is a support for the operator when necessary. Sixty-four cases have been operated upon this way.

THE BANDAGE AFTER LABOR. — While the majority of the profession have discarded the abdominal pad in ordinary cases of labor, and indeed have come to look upon the "Binder" with less

respect than formerly, yet it holds its place, and very properly, as one of the essentials to the after-labor toilet. The following from the editorial columns of *The Med. Jour.*, will be of interest. "Before the Obstetrical Society of London, Dr. Herman considered the use of the binder or bandage during the lying-in period, and concluded that its sole utility consisted in the comfort it gives the patient. He did not think it had any effect in keeping the waist measurement small and so preserving the figure of the patient. To counteract the injurious effects of the sudden lowering of the intra-abdominal pressure it should be applied at the moment that evacuation of the uterus takes place. Dr. Gervis said that patients wanted it not so much because it might influence the size of the waist, but for the support it gave to the lower abdomen and its effects in checking any tendency to undue fulness there afterwards. It promotes uterine action and checks hæmorrhage. Non-use of the binder leads occasionally to 'pendulous belly,' and its consequences. When properly adjusted it promotes involution."

TREATMENT OF VENEREAL DISEASES.—For syphilis, there are three methods in use. 1. The radical cure, or Hutchinson's plan: Small doses of mercury are given for a very prolonged period, with a view to prevent the appearance of tertiary or even secondary symptoms. 2. The ordinary London plan: Treat the symptoms of syphilis as they arise, by the internal administration of mercury. 3. The expectant, or Edinburgh plan: Use only local applications to cure the earlier syphilitic manifestations, and avoid giving mercury internally.

Just here it will be interesting to note, for the benefit of those who follow the last plan, the following from *Monats. für Chir.*, as to the duration and method of treatment of syphilis. The plan of treatment employed by Leloir, of Lille, is as follows: The initial lesion is treated with applications of a mercurial preparation. Constitutional treatment, which is withheld until secondary symptoms appear, consists of daily inunctions of from thirty to sixty grains of mercurial ointment, and the first course is continued for a period of from six to ten months. An interval of freedom from treatment from three weeks to two months is then allowed, and the inunctions are again instituted and kept up until the end of the second year. To prevent the accumulation of the drug, a diaphoretic or a laxative is occasionally given; and in the exceptional cases in which headache or bone pains are severe, iodide of potassium in combination with the bromide is prescribed. After the end of the second year, the course depends upon the severity of the case. If symptoms have been absent for a long period, the inunctions are made every three months for ten days, and then the iodide of potassium is exhibited for several weeks, in doses of from thirty to forty-five grains daily. After the third or fourth year, if there has been absence of symptoms for one year, the inunctions are made twice a year for ten days, and followed by a course of the iodide as before. This plan is continued if the patient is seen after the fourth year.

Leloir avoids the internal administration of mercury, on the ground that it may give rise to unfavorable symptoms, and employs it only when there is some reason why the inunctions cannot be practised. Hypodermic injection of mercurial preparations he seldom resorts to, and then only in hospital patients.

THE TREATMENT OF A RED NOSE.—One-fifth of the cases, according to Unna, are due to acne rosacea, with vascular dilatation; it has often a direct connection with seborrhea of the scalp; this seborrhea should be treated by the ordinary methods.

When acne rosacea is present, Unna administers fifty centigrammes of ichthyol internally, and prescribes at the same time aqueous lotions of the same substance. The following is also used:—

℞.—Zinc ointment, ... 20 grms.
Powdered rice, ... 5 "
Sulphur, ... 2 "

Unna also advises punctures of the dilated venous trunk with Hebra's instrument, repeated two or three times a week. The use of ichthyol soap is also indicated. Warm water alone should be used.

THE TEN COMMANDMENTS OF ABDOMINAL SURGERY.—Dr. Griffiths (*Med. Herald*) gives the following. 1. The arrest of hæmorrhage. 2. The avoidance of mechanical irritation. 3. The guarding against infection. 4. The proper apposition

of the edges of the wound. 5. The provision of necessary drainage. 6. To apply gentle pressure to prevent exudation. 7. To give perfect physiological rest. 8. To secure the best possible position of the parts to promote comfort and healing. 9. To provide for hygienic surroundings. 10. To attend to the patient's general health.

TREATMENT OF LARNYGEAL SPASM.—The treatment of spasm of the glottis is often difficult and uncertain in its results, but Sir Morel Mackenzie writes (*Hospital Gazette*) that by setting up a rival reflex the larnygeal spasm may be instantly overcome. The patient need only take a pinch of snuff or black pepper into the nostrils, or if neither can be obtained, the nares should be tickled by a feather. The immediate result is a paroxysm of sneezing, after which the breathing is relieved.—*Med. News.*

KELOID.— In the treatment of small keloid growths, Dr. Browning (*London Med. Rec.*), has obtained satisfactory results from the application of perchloride of mercury in collodion (1 in 30) The tumor is thickly coated with this application, which is allowed to remain on until it peels off, which usually takes 5 or 6 days. Another coating is then applied, and so on, until by successive coatings, the growth is reduced to a level with the surrounding surface.

ETHER INJECTION FOR NEURALGIA.—Dr. Kunes, of Antwerp, has conceived the plan of using subcutaneous injections of ether in the treatment of neuralgia. He prefers to use Hoffman's anodyne, containing equal parts of ether and alcohol. He injects as near the seat of pain as possible, a quantity equal to what an ordinary Paravaz syringe will hold. Often a single injection has sufficed, but in a certain number of instances, two or three have been found necessary.

THE CURE OF HYDROCELE.—Prof. John A. Wyeth always cures hydrocele by injections of pure carbolic acid. All the liquid must be first drawn off with an aspirator. About thirty minims of carbolic acid is a sufficient quantity to sear the sac. This is not as painful as might be supposed. The first effect is to cause swelling, which soon subsides. In fifty operations two cases only have failed to be cured by the first injection.

A REMEDY FOR PHTHEIRIASIS.—There is certainly no lack of remedies for phtheiriasis (*Med. Press*) but the simpler plans are often those last thought of. One of the best washes for the removal of the ubiquitous parasite from the hairy parts of the body is a decoction of quassia to which a little borax and glycerine have been added.

FOR IRRITABLE BLADDER.—Prof. Bartholow, whom the whole profession sympathize with on account of his failing health, induced by long-continued over-work, says that gelsemium will often do more good in irritable bladder than any other remedy. It is especially adapted to those women of hysterical type, troubled by irritability at the neck of the bladder calling for constant urination.

LAWSON TAIT, *Cleveland Med. Gaz.*, lays down this rule: If pain precedes menstrual flow, it is tubal; if the pain follows the appearance of the flow and chiefly referred to the back and spasmodic in character, it will be found to be due to some mechanical obstruction in the uterus. Sterility following this symptom should be treated by dilatation. When the menstrual epoch is unaccompanied by pain, dilatation will not avail.

LASSAR'S PASTE.—The following is the celebrated Lassar's paste. It may be applied directly by the finger or on strips of cloth. Its usefulness is best seen in many varieties of eczema and interbrizgo:

R.—Acidi salicyl., ...	ʒ ss.
Zinci ox., ...	ʒ ij.
Amyli, ...	ʒ ij.
Vaselini	ʒ ij.—M

ARSENIC IN CYSTIC GOITRE.—Dr. Snow (*Brit. Med. Jour.*) speaks highly of arsenic in cystic affections of the thyroid gland. In one case in which he employed the drug, the thyroid enlargement entirely disappeared. In two other cases the improvement was very marked in a short time, but the patients ceased attending very soon after the treatment was beginning to show its influence.

DR. EWART lately showed (*Lancet*) at a meeting of the medical society of London, a woman, aged 48, who was the subject of complete situs inversus viscerum. The abdominal organs had been mapped out. She was right handed and complained of nothing but palpitation and dyspepsia.

NIGHT SWEATS.—In *Rév. Gén. de Cl in. et de Thérapeutique*, we find the following formula, which may be useful to some of our readers, who, on account of the subsequent increase of cough, or some other reason may not be able to use atropine :

(*a*) R.—Sulph. or tannate of quin., gr. xv.
Powdered ergot, . . . gr. xxx.—M.
Divide into four powders and take two or three in the course of the day. This is also valuable in cases having a tendency to hæmoptysis.

(*b*) R.—Powdered agarcine, . . . ʒ j.
Make into four powders and take one at night.

(*c*) R.—Powdered agarcine, ... ʒ j.
Powdered belladonna root, gr. vij.—M.
Divide into four powders, take one at night.

(*d*) R.—Powdered agarcine . . . . ʒ j.
Tannin, ... ʒ j.—M.
Make into four powders and take one or two during the day.

A YOUNG practitioner, after some four or five years' practice, took to himself a wife, and being desirous of combining business with pleasure, he decided to spend the honey-moon in Chicago, and while there take in the Polyclinic on abdominal and pelvic surgery, and on his return quite innocently remarked that he had had more experience with the *abdomen* and *pelvis* during those two weeks than he had had for five years previously !

MALE NURSES.—Among the names of the first graduates of the new training school for male nurses, New York, we notice those of R. Hood, London, Ont., and J. E. Maund, of Toronto. We wish them every success in their new profession.

Books and Pamphlets.

DISEASES OF THE EYE. By Edward Nettleship, F.R.C.S., Ophthalmic Surgeon to St. Thoma's Hospital, etc. Fourth American, from the fifth English edition, with a chapter on Examination for Color Perception, by William Thompson, M.D., Professor of Ophthalmology, in the Jefferson Medical College. Philadelphia : Lea Brothers & Co. Toronto : Carveth & Co. 1890.

This American edition is up to the latest developments of the specialty of the eye. There have been not a few important changes in, and additions to, the original text as found necessary by the editor. While the work is really intended for the specialist, it may be read with great profit by the general practitioner who attempts to deal with the simple diseases of the eye, and also by students who are engaged in the study of such diseases during their hospital course.

ESSENTIALS OF PRACTICE OF MEDICINE, ARRANGED IN THE FORM OF QUESTIONS AND ANSWERS ; PREPARED ESPECIALLY FOR STUDENTS OF MEDICINE. By Henry Morris, M.D., Late Demonstrator Jefferson Medical College, Philadelphia, etc., etc.; with a very complete Appendix, on the Examination of Urine, by Lawrence Wolff, M.D., Demonstrator of Chemistry, Jefferson Medical College. Philadelphia : W. B. Saunders. Toronto : Carveth & Co. 1890.

This is a double number, and contains the most important points as to definition, causes, symptoms, pathology and morbid anatomy of the principle diseases. We can commend it as one of the best of a good series. In the same series we have received

A COMPEND OF GYNÆCOLOGY. By Henry Morris, M. D., Late Demonstrator of Obstetrics and Diseases of Women and Children, in the Jefferson Medical College, Philadelphia, etc. with forty-five illustrations. Philadelphia : P. Blakiston, Son & Co. Toronto : Carveth & Co. 1891.

A very useful compend based upon the works of Skene, Emmet, Goodell, Thomas, etc. Dr. Morris' name is sufficient guarantee of its being one of the best works of its kind on the subject that can be produced.

KOCH'S REMEDY IN RELATION SPECIALLY TO THROAT CONSUMPTION. By Lennox Browne, F. R.C.S. Ed., Senior Surgeon to the Central London Throat, Nose and Ear Hospital. Author of "The Throat and Nose, and Their Diseases," etc. Illustrated by thirty-one cases and by fifty original engravings and diagrams. Philadelphia : Lea Brothers & Co. Toronto : Carveth & Co. 1891.

A Good Opening for a Physician.

THE ADMINISTRATORS of the late James McLaughlin, deceased, offer for sale his late residence, together with three-and-one-half acres of land in the village of Fingal, in the County of Elgin, situated in the centre of one of the very finest agricultural districts in Ontario.

The late doctor had a very large and lucrative practice. This is a rare opportunity for a good doctor. The property will be sold on easy terms. Apply to John McLaughlin, Fingal ; or, David McLaws, St. Thomas.

JOHN MCLAUGHLIN, } *Administrators.*
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St. Thomas, Mar. 21st, 1891.

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Original Communications.

SOME CASES OF EXTRA- AND INTRA-PERITONEAL INFLAMMATION WITH AND WITHOUT ABSCESS FORMATION; A PLEA FOR THE OPERATIVE TREATMENT OF PERITONITIS.*

BY J. F. W. ROSS, M.D., C.M.

Lecturer on Gynæcology and Abdominal Surgery, Women's Medical College, Surgeon to the Women's Hospital, Toronto, Gynæcologist Toronto General Hospital, and Toronto Dispensary, Lecturer on Abdominal Surgery, Toronto University.

Gentlemen,—I feel that this paper is very imperfect. It has been thrown together rather hastily, its only merit being its originality. I have not endeavored to pad it from the experience of others as culled from a library, but have made it practical. It includes many cases that bear on the subject of operative interference for cases of traumatic lesions in the neighborhood of the peritoneal cavity, still decried by many of the old school. It simply puts forth a few of my own convictions, to be accepted or rejected by you as you see fit.

No. 1.—While in general practice some five years ago, I was sent for by a gentleman to see his five-year-old daughter, who had been taken suddenly ill, with "pain in the stomach and vomiting." On reaching the house I learned that the child had fallen over the high end of the sofa on the preceding day. She had climbed up on the end, and, on account of her weight overbalancing it, it tipped up and she fell. She felt faint and sick at the time, but soon went on with her play in a half-hearted sort of way. I found her about fourteen hours after with a rapid pulse, knees drawn up, and complaining of severe pain over the belly. The pain caused her to scream and cry out in a most distressing manner. Tympanitic distention soon set in. I treated the case as one of peritonitis, after the usual method of that time, but she gradually grew worse. For weeks she lay in this condition, hanging between life and death Many consultations were held, and all agreed that the case was hopeless, though as a matter of policy we held out the barest possibility of a recovery. The father, who was very sanguine, would soon have dismissed any physician who gave no hope. The pulse at times could scarcely be counted. At last a dulness in the right lower portion of the abdomen could be distinctly mapped out, extending to the middle line. The tympanites was still very distressing, the body terribly emaciated, but the patient seemed possessed of enormous vitality. She had been blistered and poulticed very faithfully. Irritation of the bladder set in. The child seemed about to succumb to this last distress when pus suddenly appeared in the urine, and the bladder symptoms were, to some extent, relieved. Pus continued to come in this way for some weeks, but the abdominal symptoms improved. Tympanites disappeared, pulse became slower, and though the temperature still ran high, the patient gained strength. Convalescence was very slow, but the little girl is now the very picture of health.

No. 2.—N. R., æt. 9, a bright, healthy child, was out playing ball with some other children. The ball struck her in the abdomen, giving her pain at the time. Through the night she was seized with vomiting and pain in the belly. Her mother thought that she had perhaps eaten something that disagreed. I saw her the next day, and found her lying with her knees drawn up, abdomen distended, and retching violently. She was screaming out with pain. The usual treatment was adopted. Dr. H. H. Wright saw the case in consultation and agreed with my diagnosis of acute peritonitis. The temperature remained high, and the patient died in a few days.

No. 3.—A little boy was admitted into the Children's Hospital under my care. He had been playing "tip cat," with his companions, a most dangerous game, and the cat, a piece of wood with which all boys are familiar, struck him a violent blow in the right inguinal region. Symptoms of localized peritonitis came on; a large mass gradually devcloped over the seat of injury and gradu-

*Read before the Ont. Medical Association, June, 1890.

ally disappeared after many weeks. The pus was discovered in the urine or evacuations.

No. 4.—Mr. C., a painter, was visiting in the neighborhood of Woodstock. He was suddenly seized with severe pain in the right inguinal region accompanied by a chill. Opiates and purgatives were administered, but did not give relief. He came to the city and sent for me. I had attended his family and had often seen him. As he had a horror of lead colic he took the greatest care to prevent the entrance of lead into his system. He had some vague idea of having recently knocked his side. On carefully examining the abdomen I could feel a definite resistance in the right ingunial region. His temperature was high, tongue coated, face anxious and pulse accelerated. His condition did not improve. There was no difficulty in moving the bowels at this time and no vomiting. The feeling of definite resistance increased into a tumor, that could be made out. This was evidently deep and pressing inwards towards the abdominal cavity. His bowels became obstructed and vomiting set in. A consultation was asked for. I felt that unless some operation was done for the relief of the pressure on the bowels, the case would be fatal. They were people averse to any surgical interference and the young man was quite prepared to die. I urged operation, but the voice of the consultant overweighed mine, and the case was left alone. Today I would operate on such a case or have nothing more to do with it. He went on in this condition gradually dying of starvation. His was one of the most distressing deaths I have ever witnessed. When he became emaciated the lump could be more distinctly felt, now much increased in size. Unfortunately no *post mortem* could be obtained. The case was undoubtedly one of pericæcal abscess, pressing on and obstructing the bowel.

No. 5.—Mrs. T., a woman 60 years of age, sent for me. I found her suffering from the symptoms of acute peritonitis. Some few days previously she had done a very heavy washing in a very open and draughty shed. No history of injury or of any pelvic trouble. I knew her past history and knew that she had been a robust woman. Fearing expense she had deferred sending for me until the symptoms were well defined. The tympanites was very distressing. Volumes of gas would belch up from time to time, but without giving relief. The pulse was very rapid and breathing labored and shallow. For about two weeks she lay between life and death, and then some improvement took place. The tympanites began to disappear, but the bowels remained obstinate. Unfortunately some zealous neighbor gave her a whole bottle (25 cent) of castor oil, and she was soon as ill as when first attacked. The tympanites returned and I expected momentarily to receive a telephone message, to say that she was dead. She convalesced very slowly, and remained a semi-invalid for fully twelve months after. No pus could be discovered in the urine or evacuations, or anytumor be felt. The cause of the attack could not be definitely made out.

No. 6. A very celebrated lacrosse player was throwing an over-hand shot with all his force when he felt a sudden pain in his abdomen. It did not last and was not severe. After retiring for the night a very intense pain seized him about two inches above the navel in the median line. He was in perfect health up to this date. I was sent for and found him writhing in agony. In spite of large doses of morphia the pain remained at times almost unbearable. It was paroxysmal but distinctly localized. The case was a puzzling one, and I tried to make a diagnosis by excluding other diseases. It had some features different to both hepatic and renal colic. No bowel symptoms supervened to point to intussception or internal hernia or volvulus. The bowels moved freely. Typhoid fever could be excluded owing to the previous good health and history of sudden injury. The temperature was during the first week elevated about a degree. The pulse was normal, tongue was, however, from the first furred like the tongue of typhoid. A temporary improvement took place and the patient was so much better that I only visited him every second day. I was once more suddenly called one night to relieve his "awful pain." Had there not been a rise of temperature and the furred tongue, I should have looked on the symptoms as partially nervous. From this second attack, his pulse and temperature both rose higher. No enlargment was to be felt over the abdomen; suddenly the the urine was retained and the catheter was required to relieve the patient. I thought that this was partially due to the long use of the opiate.

But within 24 hours of the onset of this sypmptom mucus was frequently passed by the bowel, a sign of rectal irritation. I examined with the finger, as I had already done more than once in the former period of his illness, and now found a large fluctuating mass, pressing on the rectum bhind and uthera in front. This was distinctly the cause of the retention of urine. I at once called a consultation; Dr. Grasett saw the case with me, and we determined to puncture through the rectum the next day, with the patient's consent. The abscess broke during the night and the patient was once more able to pass water without assistance. During his convalescence he had had a sharp attack of epididymitis on the left side. The convalescence was slow but he can now handle his lacrosse stick with the best. Was this an extra-peritoneal hæmatocele, with subsequent suppuration?

No 7. Miss A. G., æt 18, was in the second week of typhoid fever. A sudden severe pain was felt in the left hypochondriac region about its lower margin. I arrived within five or six minutes by accident, and at once concluded that perforation had taken place. She was collapsed. I ordered absolute quiet, on the back, and at once injected ¼ gr. morph. sulph. hypodermically. Stimulants were given by the rectum and the stomach kept empty. The primary retching ceased, and for weeks the patient lay in one condition hovering between life and death. The distention was very distressing. The opiate was given only hypodermically. About a week after the onset of the peritonitis she passed blood twice from the bowels. The bladder symptoms were distressing; convalescence was complete, and the patient has since become a mother without especial difficulty.

No 8. Miss L., aged seven years, was creeping under a low bedstead for a ball, and when turned on her back struck the abdomen against the sharp edge of the bed stead just to the right of the navel. A soreness continued and increased to an unbearable pain before night. I was sent for about 10 p.m., and found her crying with pain, knees drawn up, temperature elevated, p ulse rapid and countenance anxious. There had been some sickness of the stomach. Being homœopathic in their belief, I treated her, as a leading chemist leads me to believe they would have done, by giving her a good full dose of morphia to relieve her pain. Slight distention developed but never increased. A hardness could be felt around the neighborhood of the injury as soon as the sensibility to pressure of the hand was dulled by the opiate. She continued in this condition for about a week, the temperature and pulse then became normal, and the hardness gradually disappeared, so that she was up in about three weeks from date of injury. No darkness was noticeable beneath the skin to indicate a superficial effusion of blood, but I suspect that a sudden hæmorrhage occurred beneath the peritoneum, that is a preperitoneal hæmorrhage.

No. 9. The next case was one of a large extra peritoneal hæmorrhage, occurring from rupture of the right kidney. Mr. K. was working in a saw mill, sawing a log, when a piece of wood about 1½ inches square and 2 feet long, was thrown javelin-like from the rapidly revolving saw. It struck him just below the margin of the ribs, on the right side of the abdomen. He fell to the ground instantly, and was carried home in a collapsed condition. A large lump developed immediately, and he passed about a pint of blood and water from the bladder. The lump was as large as two fists, and filled the right lumbar region. Fluctuation could be made out. I concluded that the right kidney had been ruptured, and that a large extravasation of blood external to the peritoneum had caused the enlargement. For several days he lay in a desperate condition, but recovered some of his former vigor in a short time. For a year a year he was not robust, but when last seen by me had no complaint to make about his health. Albumen was found in the urine from the first until the last time examined, several months after the injury. The hæmatocele gradually disappeared without evidence of suppuration. Even with this large collection of blood in the cellular tissues there was nothing in the color of the skin to indicate its presence. Now, to summarize the foregoing cases and endeavor to draw some conclusions: In none of them was any operation undertaken. In two, death occurred. Might not these two have been saved by operative interference. I certainly believe that in the one case of obstruction of the bowels from abscess pressure, the life might have been saved. Operation could not have harmed the patient. In the other case, that of the little girl, the opening of an already inflamed peritoneum could not have increased such

intense inflammation, but the local depletion consequent upon the operation, and the relief of congestion produced by hot water, irrigation would have been beneficial. Another question that suggests itself is, "Are not many of these cases due to a traumatic hæmorrhage?" If not, why should such a great amount of hardness supervene in so short a time after the injury. We open the peritoneum, we cause a peritonitis by our operation, but we do not notice such brawny hardness unless we have hæmorrhage from needle puncture in applying sutures, or from some bleeding vessel left unsecured from some part of the wound. This blood burrows in the planes of the connective tissues and occasionally suppuration occurs. I have seen blood tumors form in this way, and, fortunately for the patient, rupture occurred through the wound after the commencement of suppuration and not into the peritoneum. Pure blood is undoubtedly harmless to the peritoneum.

It has always puzzled me to explain traumatic peritonitis in any other way. With this traumatism no germs are admitted so that there can be no septic element in the cases. If we exclude, according to present beliefs, the septic element as a causative factor in the peritonitis following operation, we will not have many cases left to classify. If the mere injury to the peritoneum produces peritonitis, we should have peritonitis after every abdominal section. We tear this formerly dreaded membrane, we cauterize it, we swab it with iron, we injure it with pressure forceps, and yet it escapes inflammation. My own belief is that more is to be dreaded from a stripping off of the peritoneum from the preperitoneal tissues, from which it receives its nourishment, than from any mechanical injury to it, and I believe that what is identical to this stripping off occurs in cases of direct traumatism, by the rupture of small vessels of the peritoneum and the neighboring connective tissue. Another lesson to be deduced from these cases is that there are many cases in which the symptoms are not severe enough to justify operation. This was the case in the post-peritoneal abscess. The patient made a good recovery without operation. But the case of encysted pus in the little girl might at first thought be placed in the same category. The issue was good, but cases in which pus finds its way through the bladder, do not all have such a happy ending. Only two weeks ago I saw one in consultation, and in spite of operative treatment she died. If the abscess had been opened early, her life might have been spared. In such a case as that of the little girl, I should open the abdomen and drain. Then again, the old woman of 60 could not have been injured by opening her abdomen. By this method of treatment all doubt is dispelled, a perforating gall stone is found, a suppurating ovarian cyst is discovered, a perforated appendix brought to light, and the cause of the disease is at once removed, while the disease itself is having the very best treatment. It is only two weeks since I operated upon a case of peritonitis sent to me, unfortunately too late. Her temperature was 103 and pulse very rapid, but I thought it best to give her the one chance of saving her life by finding out the cause of the inflammation. Through the vagina nothing but a fulness binding down the uterus and ovaries, such as was formerly supposed to be due to that "will o' the wisp" pelvic cellulitis. On opening the abdomen I found the peritoneum thickened and studded with nodules of inflammation, similar to the nodules found in a case of tubercular peritonitis, I had just opened and drained half an hour before. The cavity of the peritoneum was filled with serous fluid. On the left side I found a suppurating ovarian cyst about the size of an orange, and a large suppurating hæmatocele of the broad ligament on the right side. The cyst was very adherent, and with difficulty removed; the hæmatocele was opened, washed out and drained through the abdomen. The patient almost died on the table, but rallied fairly well and lived for 10 hours. Under such circumstances one cannot wonder at the result. Pulse and temperature both dropped after the operation, but the temperature soon rose again and the patient died. How useless it would be in such a case to wait for a spontaneous cure? And yet how often it is done. I believe that it should be the rule of practice to open the abdomen in every case of acute peritonitis. I will relate two other cases to qualify my assertion.

Two years ago I removed a small ovarian cyst bound down by adhesions, and put in a glass drainage tube. The tube was removed within twelve hours, and the patient became suddenly worse. Acute peritonitis set in, temperature and pulse

rose rapidly and distention came on. I determined to re-insert the drainage tube, and, assisted by Dr. Temple, re-opened the abdomen and re-inserted the tube. As soon as the wound was re-opened a quantity of blood-tinged serum, gushed out. Within twelve hours the symptoms improved, and the patient made a splendid recovery.

The second case was one I saw while with Mr. Tait. A young woman with acute peritonitis; abdomen was opened, pus washed out. This pus had a decidedly fæcal odor. The peritonitis was caused by extravasation of fæcal matter into the abdominal cavity, but the case had been allowed to go on until the girl's abdomen was opened at a time when operation had no fair chance of being successful.

It is only ten days since another case was brought forcibly before me. Some four months ago I saw, in consultation with a brother practitioner, a lady patient of his, in whose abdomen he had discovered a small tumor to the left of the navel, on a line with the level of the tenth rib. The tumor was about the size of a hen's egg, and seemed to fluctuate. It gave her no particular inconvenience, and she would not listen to any proposal of operative interference. Some two weeks ago she was taken suddenly ill. Her physician telephoned to me, so that I might at once open the abdomen. Unfortunately, I was away from home for a few days. Another consultant, unfamiliar with abdominal surgery, was called, at the request of the family, and he advised that she be left alone. She was left alone, and died from an acute peritonitis in from three to four days. There can be no doubt from the description given me by her physician that the tumor ruptured, and that the contents, whatever they were, set up the fatal inflammation.

I might relate other cases of perforating gallstones, ruptured ovarian cyst, ruptured pyosalpinx, perforation of the vermiform appendix by orange seeds, etc. The actual cause of peritonitis in any given case is only to be guessed at, and cannot be ascertained without an intra-abdominal exploration. Such causes as "cold," "chill," are so indefinite that they should not receive any consideration, but the question asked should be, "Is this due to perforation of a gallstone, perforation from ulceration, hæmorrhage from injury, rupture of an abcess, appendicitis, volvulus, internal hernia, strangulated or suppurating ovarian cyst, rupture of pyo-hydro- or hæmatosalpinx, rupture of ectopic gestation, to rupture of liver, spleen, kidney, or bladder, if due to injury?" And the only method by which the question can be accurately answered is by opening the abdomen.

Cases such as that of the large effusion of blood from rupture of the kidney, and that of the little boy playing with the "tibby cat," and the little girl injured by the bed, are better left alone, unless more severe symptoms supervene. Operation to stop hæmorrhage from a ruptured kidney by removing it, or by packing, might be done if the patient rallied and the hæmorrhage through the bladder continued. If suppuration set in, the clot should be cut down upon and turned out. The perforation accompanying typhoid fever, I fear will be better left alone. I quote the one case in which recovery took place without operation. There was no doubt a perforation. For two days before the patient had the usual symptom of approach of the ulcer to the peritoneum, namely, pain over the very spot at which the violent pain commenced two days later, accompanied by collapse and acute general peritonitis. I have not yet seen reported any case of recovery after abdominal section, done for the cure of peritonitis due to typhoid perforation. One other case of abdominal injury allowed to die without operation, comes vividly before me. A man was kicked in the abdomen by a horse. Symptoms of collapse at once set in. He rallied well, but a mixed set of symptoms set in. Vomiting occurred. It persisted, and was identical with that due to intestinal obstruction. The bowels moved. Hands and feet became cold, pulse rapid, and at the end of a week the patient died. I have always thought that he might have been relieved by an exploratory incision. Operation could have done no harm, and would, at least, have shed much light on the case. The exact nature of the injury would have been made out.

There are then a few conclusions that may be summarized. They are simply the outcome of my own thought, and may not have any value, but they are as follows:

1st.—That in typhoid-perforation operation is useless.

2nd.—That in traumatic general peritonitis,

and in all cases of general peritonitis, the abdomen should be opened, washed out and drained, and the cause of the peritonitis found and removed.

3rd.—That in cases of localized peritonitis, and in obscure cases of injury not followed by general peritonitis, it is better to follow an expectant plan of treatment, unless abscess formation can be made out.

4th.—That in all cases of abscess formation, opening and draining will give the most rapid convalescence, and will prevent unfavorable rupture into other parts.

5th.—That in view of the complications that may be found after opening the abdomen, the best interests of the patient will be consulted by having the operation done by some one accustomed to do abdominal surgery.

REPORT OF A CASE OF ACUTE SUPPURATION OF THE KNEE-JOINT, WITH COMPLETE RESTORATION OF FUNCTION.*

BY H. HOWITT, M.D., GUELPH, ONT.

Although it is now approaching two years since the case which is the subject of my paper was under treatment, yet I have reason to hope that some features of it may prove of interest to you.

Frank F., æt. 21, a farm laborer, while engaged with a companion cutting grass, on the 5th of July, 1888, accidentally received a blow from a scythe on the right knee, which inflicted a wound an inch and a half in length, extending backward from a little behind the lower part of the inner border of the patella. It ran parallel with, but was situated a line or two above, the upper margin of the internal semilunar cartilage, and in depth it could not have been extended without opening the synovial cavity.

Within an hour after the accident occurred a medical student carefully washed, sutured and dressed the wound. He also gave excellent advice as to the necessity of keeping the limb absolutely quiet, but failed to make this sure by applying a suitable splint. The result was that in less than three days the patient was again busy in the fields, and owing to the position of the injury the sutures cut through, the wound gaped and became inflamed and painful. Notwithstanding this, and considerable swelling and stiffness of the part, he refused to quit work.

On the fifteenth day he had a rigor, followed by high fever and a sudden painful swelling of the articulation, which compelled him to remain in the house. For five days various domestic remedies were employed, and these having failed to afford any relief, a message was left at my office. On examination it was easily ascertained that the young man had acute suppurative synovitis. He had severe local pain, and marked constitutional disturbance. The limb was semi-flexed and rotated outward, the knee greatly distended, reddened and œdematous, the patella floating and the circumference of the joint fully three inches greater than normal.

The wound was inflamed, angry in appearance and presented a mass of granular tissue which protruded above the surface of the surrounding skin. From a minute sinus in it, serous pus oozed slowly drop by drop. Doubtless this acted as a safety value, and prevented a rupture and escape of pus at a less favorable place. Forced flexion or extension of the leg aggravated the constant pain beyond endurance. Anorexia and insomnia were prominent symptoms. His evening temperature was 103½° F., and night sweats and occasional delirium indicated septic intoxication.

Not being satisfied with his environment he was advised to go to the city hospital; he promised to do so, but for some reason failed to put in an appearance there before the 5th of August, or one month after the accident, and fifteen days after the onset of suppurative synovitis.

The whole leg had now become œdematous, and the contour of the limb so changed that it might easily lead one to suppose there was partial backward dislocation of the head of the tibia. Two weeks of acute suffering and high fever, with loss of sleep and appetite had told heavily on his constitution; to be brief, he was in a critical condition.

It was difficult at first to decide what line of treatment to follow, and what object to have in view as to result. According to the teaching laid down in the text books of the day, amputation was a question to be considered, but the knowledge that a poor uneducated farm laborer with

*Read before the Ont. Medical Association, June, 1890.

an artificial limb and without friends, would have up hill work to avoid the poor-house, made me decide to accept considerable risk in order to save the limb. Knowing the wonderful results which attend thorough and complete washing and drainage in some of the suppurative troubles of the peritoneal cavity, I determined to treat the knee in harmony with the principles advocated for such cases.

The synovial sac was certainly in a septic condition, nevertheless the greatest care was taken in preparing everything likely to come in contact with the limb during the operation. A large fountain tank, having a half inch rubber attachment of sufficient length and a suitable nozzle, was placed in readiness for use.

When the patient was anaesthetized the small sinus referred to above was dilated so as to admit my fore-finger, and then a free incision was made into the outer side of the knee. From these considerable watery pus with flakes of lymph and pieces of membrane escaped; and on inserting my finger several large pieces of membrane were found, either free or caught in the folds of the synovial membrane. All the articular surface accessible to the finger had deposited on it a peculiar putty-like substance which made it feel rough to the touch. It was with difficulty removed with the finger and douche.

The nozzle of the fountain apparatus fitted pretty accurately the dilated sinus, and by placing it in position and turning on the water, a constant stream could be maintained through the joint, while the finger by a scraping movement cleaned the walls. Closing the outer opening around the base of the inserted finger while the water was running caused the cavity to become distended. When thus distended the various recesses of the articulation were rendered easy of access; not even excepting that under the tendon of the quadriceps. Alternately flexing and extending the leg during distention was also of service in loosening *debris*.

Upward of an hour was spent with finger and douche before the water came away clear. Until it did so hot water alone was used, but afterward the joint was several times filled and flushed with a 1 to 4000 mercuric solution, in all more than five gallons of fluid passed through the articulation.

A short rubber drainage tube, merely long enough to reach to the cavity, was placed in each wound, two or three sutures inserted and then a posterior splint and moist mercuric dressings completed the operation.

He slept soundly that night and awoke next morning without either pain or fever, and, while he remained under observation, his temperature never rose again above 99° F. His appetite returned and he gained rapidly in weight and strength. The drainage tubes were not required after the first twenty-four hours.

In two weeks the patient was on his feet and able to walk by the aid of a cane, and in another fortnight, contrary to my advice, he returned to his work on the farm, where, that fall, besides doing other laborious work, he ploughed fully twenty-five acres of land. Except a feeling of weakness and a little stiffness in the knee, for a short time after he left the hospital, he had no inconvenience from it. At the present time all the movements of the important joint are capable of being easily and perfectly performed, and in fact, when we overlook the cicatrices there is not anything abnormal to be detected.

Correspondence.

To the Editor of the CANADA LANCET.

SIR,—In this month's issue of the LANCET you publish a diet table for Diabetics taken from the *St. Louis Med. Herald.* My experience with diabetic patients for some years past, as a manufacturer of Gluten Flour and Hygienic Foods, has enabled me to see the injurious effects of some of the articles of diet recommended in that list. I refer particularly to acid fruits, especially apples. In three particular cases, apples proved very injurious and counteracted the good effects of a diet of gluten flour and other foods in which the starch had been converted into dextrine. In one case, the free use of apple cider was the cause of the diabetic trouble. It is customary for physicians to copy such diet lists for their patients, and, knowing the injury of apples in nearly all cases, I deem it necessary to draw your attention to the facts that have come under my observation. Another important point is that I have known infants and persons under twenty-five years of age who have been absolutely cured of diabetes,

while persons above thirty could have the trouble greatly diminished, but never to the extent that they could eat all kinds of food.

Yours truly, F. C. IRELAND.

Toronto, April 6th, 1891.

Reports of Societies.

GYNÆCOLOGICAL AND OBSTETRICAL SOCIETY OF BALTIMORE.

FEBRUARY MEETING.

The President, Dr. Henry M. Wilson, in the chair.

Dr. Neale reported the following case of "Occlusion of the os uteri during four days parturition."

Mrs. K. W., æt. 26 years, white, 1 para. Past history unimportant. Last menstruation early part of April, 1890. Pregnancy, normal up to Nov. 1st, 1890, when she slipped and fell violently on her right side on the pavement. There was no vaginal discharge at the time and no discomfort except from the jar, bruising, etc., and the patient was up and about all the time. No movement of the child was felt after the fall.

About Christmas, 1890, an offensive, yellowish, vaginal (uterine) discharge occurred, and continued for one week.

On the night of January 12th, 1891, her first labor pains began, and were so severe as to require morphine to be given by her attendant. There was no show or discharge of any kind. The pains increased and the patient was suffering severely when I saw her for the first time Friday evening, January 16th, 1891. She was a large, well-built and well-nourished woman. Could not distinctly map out the child by abdominal palpation. By auscultation gurgling over the entire uterine tumor, and not a trace of fœtal heart sounds could be heard.

By vaginal examination: Very short and small vagina, no cervix and no os! A continuous layer of mucous membrane, flush with the vaginal walls, closed over the entire vault of the vagina, a little dimple in its centre was the only indication of where the os ought to be.

Patient chloroformed, placed in position, hand in vagina, finger pressed against the dimple when it suddenly yielded or burst open like a membranous web, permitting a gush of *not* foul-smelling bloody water to escape, and at once the rapidly enlarging outlines of the os could be felt, then about as wide as a silver half-dollar piece. The soft bagging scalp and loose cranial bones came down upon the enlarging os, and as the expulsive efforts were almost *nil*, I grasped the head with a Simpson's cranioclast which tore away, and then the blades of a Tarnier basiotribe were adjusted over the head and neck, and a thoroughly macerated, but not decomposed or foul, small child was easily extracted. Perineum intact; os fissured slightly. Small placenta expressed within six minutes. Considerable post-partum hæmorrhage, uterus acting feebly. Os remained open about size of silver half-dollar piece, thick edges, uterus rather small, but not firmly retracted. Two quarts of a hot intra-uterine 1-4000 bichloride douche were injected. Patient rallied well, and, debarring an occasional slight rise of pulse and temperature and faintly fœtid lochia, which readily yielded to the antiseptic douche, the puerperum was uneventful and recovery complete. This case was a novel one to me. I am quite sure the membrane I felt was mucous and not the amniotic sac, nor do I think the case should be classed among those of cervical occlusion or stenosis from endotroachelitis.

Dr. J. Whitridge Williams read a paper on "The Induction of Premature Labor in Contracted Pelvis." He pointed out that the comparative neglect of the operation in this country was due to two causes, the absence of large lying-in institutions and the consequent lack of large amounts of clinical material, and the almost total neglect of pelvic measurement.

By the term premature induction of labor, we understand the artificial interruption of pregnancy at such a period that a viable child may be born; that is, any period from the 28th to 30th week to the end of pregnancy.

Dr. W. then went into the history of the operation and showed that it was first rationally employed for this indication in England, as the result of a conference of the eminent physicians of London, in the year 1756.

Within fifty years it was quite generally employed on the Continent, and even enjoyed a popularity which caused it to be resorted to on the most trifling pretexts, and which in 1869 called forth Spiegelberg's forcible denunciation of the operation, by which he showed that the mortality, both of the mothers and children, was nearly

three times greater after the operation, than if the woman went on to term. This was soon followed by articles by Litzmann and Dohrn, who showed that Spiegelberg had painted the picture in colors far too dark.

Litzmann showed that in moderate degrees of contraction, 8.25 to 7.5 cm. (3¼ to 3 in.), the operation was indicated in the interests of the mother, as shown by a mortality of 7.4 per cent. after the operation, compared with one of 18.7 per cent. when the woman was allowed to go on to term.

Dohrn stated that the proper method of appreciating what the operation accomplished was not to compare so many cases of induced labor with so many cases of labor at term, but to compare the results of premature and spontaneous labors in the same woman; by this method he found that twice as many children were saved by inducing labor as by allowing the woman to go on to term.

Consequently they proved that the operation was indicated in properly selected cases, both in the interests of the mother and child.

The introduction of antiseptic methods into midwifery almost completely robbed the operation of danger for the mother, as will be readily seen from the following statistics. Thus, Haidlen reports 44 cases from the Stuttgart clinic, with no maternal deaths and 72 per cent. of the children saved.

In 1889, Korn stated that Leopold lost one woman in 45 cases and saved 66 per cent. of the children, and last July Ahlfeld stated that he had induced labor 118 times with the loss of only one mother, and had saved 62 per cent. of the children. At the Berlin Congress, Fehling stated that in 60 cases he had saved all the mothers and 80 per cent. of the children.

From the above sketch we will readily see that the maternal mortality in properly selected cases is very slight; 401 cases collected by Korn showing a maternal mortality of only 2.9 per cent., or just a trifle more than normal labor in a normal pelvic, while the fœtal mortality ranges from 20 to 70 per cent., the average being about 33⅓ per cent.

So in this operation we have a means of saving about two-thirds of the children, without any risk to the mother. Or, reckoning by Dohrn's method, we save at least twice as many children as if we allowed the woman to go on to term, and then resorted to some conservative operation.

These are the prospects of the operation, but unfortunately the degree of contraction within which the operation is justifiable is very limited, and one can only think of it in moderate degree of contraction. According to Litzmann, in flat tened pelves with a conjugata vera of 7.5 to 8.25 cm. (3 to 3.25 in.); and to Schroeder, 6.5 to 9.5 cm. (2.5 to 3.75 in.).

As pelves with a conjugata vera above 8½ cm. (3⅜ in.) offer a reasonable chance to both child and mother at term, and those below 7 cm. (2¾ in.) offer no chance to the child, I think that the operation should be restricted to these limits; that is, between 7 to 8½ cm. (2¾ to 3⅜ in.) in simple flattened pelves.

In the juxto-minor pelvis a conjugata of 9½ cm. (3¾ in.) or less will usually be an indication for the operation. In the rare forms of obliquely narrowed pelvis, whatever its cause, we must be guided almost entirely by the history of previous labors.

We thus have the operation restricted to a very small range, 1½ cm. (⅝ in.), which should only be exceeded when the previous history tells us that the previous labors have all ended disastrously. We should not think of inducing labor in a flattened pelvis with a conjugata below 7 cm. (2¾ in.), for in that case the prospects for the child are almost nil and the dangers to the mother greatly increased. Here we come to the relative indication for Cæsarian section, when it is best to allow the woman to go on to term, and attempt to save both mother and child by that operation.

With these contracted indications, we readily see that an accurate idea as to the exact size and form of the pelvis is an absolute prerequisite for the performance of the operation; and the only means by which we can accurately obtain this information is by carefully measuring the pelvis.

We should not content ourselves with simply measuring the conjugata vera; but should also take the external measurements and thereby attempt to determine with what form of pelvis we have to deal. After doing that, we must carefully examine the interior of the pelvis, to determine its height; to see if it is generally contracted, and if contracted, if the contraction increases as we approach the outlet. We must look for exostosis of the pelvic bones, and carefully examine the promontory to see if it is double or not.

If we think the pelvis contracted laterally, we should measure the distance between the tubera ischiorum on each side, as Breisky recommended. We should also attempt to estimate the transverse diameter of the pelvis, which is most difficult to do, and the most that can be expected is to examine alternately with each hand and try to stroke the linea innominata and so relatively to get some idea as to the transverse diameter.

Having decided that an operation is necessary, the next question is, when shall it be done? Of course the younger the fœtus, the smaller will be its size, and consequently the easier its delivery. But unfortunately, the smaller the fœtus, the less chance will it have of living, even if it survive the operation. Generally speaking, we say a child is viable after the 28th week, but its chances of living are almost nil; indeed, children 30 to 32 weeks old have next to no chance of living. The later

the operation, the more chance has the fœtus of living after it; but unfortunately its size and consequently the difficulty of its delivery, increase with its age. If possible, the operation should be done about the 34th to 36th week, our object being to operate at the latest possible period consistent with safe delivery.

To fulfil this object, we must attempt to gain an accurate knowledge as to the size of the child's head. Unfortunately we are unable to determine its size with mathematical precision, or even with the relative precision of pelvimetry; so we are obliged to take advantage of every possible hint on the subject. Some of the following points may be of assistance in different cases. We must consider the mother's account as to the duration of the pregnancy. Notice the size of the parents, large parents usually having large children. Inquire about the previous labors, particularly as to the size of the head. Endeavor to estimate the size of the head by abdominal and combined abdominal and vaginal palpation; and note the consistency and amount of resistance to compression that the bones of the head offer.

Try to measure the head with the pelvimeter through the abdominal walls, and deduct the estimated thickness of the abdominal walls from the result. Notice the size of the large anterior fontanelle, average with 2 cm.; the width of the sutures, and the distance from the anterior to the posterior fontanelle; for as they are larger or smaller, it indicates a larger or smaller head. Measure the length of the fœtus as it lies in utero, from breech to vortex, double the measurement and it gives, according to Ahlfeld, the length of the fœtus. If a foot is prolapsed, measure it, for Goenner stated that there is a difference of nearly one centimeter between the length of the foot of a child at term and one at 32 to 34 weeks.

One of the most important methods is that of Mueller, who attempts to force the head down into the pelvis by pressure from above. As long as he is able to force the head down, he knows that labor will readily take place, but when he can no longer force the head down and when it bulges out over the symphysis, then he considers that the time for operation has arrived. As the great danger to the mother is from sepsis, one cannot be too careful in one's efforts to guard against it, and consequently one should be most particular in one's preparation for the operation.

For several days previous to operating, the woman should have a warm bath daily, and several times a day be douched with warm water—95° to 98° F.—containing salt or borax, by which the cervix is softened and dilated. Just before operating, the genitals should be most carefully washed with hot water and soap, followed by a 1 to 1000 bichloride solution; the vagina should be most carefully cleansed. The hands of the operator should be washed for at least ten minutes in hot water and the nail-brush vigorously used, after which they should be placed for several minutes in a 1 to 5000 bichloride solution.

All instruments should be sterilized by steam, or placed in a 5 per cent. solution of carbolic acid for at least thirty minutes

The most generally approved method is that of Krause, or the introduction of a disinfected flexible bougie between the membranes and the uterine wall. If properly conducted, it is almost entirely devoid of danger for the mother, and will bring about the birth of the child in a period varying from 8 to 214 hours, averaging about 80 hours—or about three days. To insert the bougie, the woman is placed on her back or side as may be most convenient, and the cervix brought down by a pair of bullet forceps and the cervical canal carefully cleansed with bichloride on a pledget of cotton; the bougie is then carefully inserted so that its lower end is within the vagina, care being taken not to wound the membranes or the placenta. Then the vagina is packed with iodoform gauze, care being taken not to wound the cervix, which serves to hold the bougie in place. If at the end of twenty-four hours no labor pains have been produced, the bougie should be removed and another introduced at another point under the same precautions as the first.

If this method fail we may resort to Kiwisch's method, of allowing a current of hot water, 100° to 110° F., to flow through the vagina several times a day for a period of five to fifteen minutes. Or we may puncture the membrane as accessory to these, we may loosen the membranes about their lower pole; tampon the vagina with iodoform gauze, or employ Barnes' bags.

If the pains are weak, Fehling recommends version by Hicks' method and bringing down one leg, whereby increased contraction is produced and one is afforded a ready means of ending the labor if one deems it expedient in the interests of the mother or child.

Dr. Neale:—I regard the chief point in this very able paper to be the endeavor to definitely fix the limits for the induction of premature labor in contracted pelves, not as opposed to Cæsarian section, but as applicable to a distinct and separate class of cases. This endeavor I strongly advocate, but at the same time must confess that I do not believe the plan is always practicable at the bed-side. There are so many factors entering into the determination of this question, as I stated in my paper, that I can now only repeat what I have quoted, viz., "A given pelvic measurement is useful as an indication of what has been the experience of others under similar circumstances, but is not a final ground for decision."

After the evidence adduced, which doubtless represents the opinion of the best medical authori-

ties, I am sure I only voice the concurrence of this Society in accepting the limits for this operation as stated by Dr. Williams. This is practically in accordance with the teachings of Lusk—probably our strongest American authority—who places the range for the induction of premature labor in contracted pelves at a conjugata vera of from 2¾ inches (7 cm.) to 3½ inches (8.75 cm.).

As stated in the paper, I believe the most reliable statistics of this operation are those of Dohrn, who compares the results of induction of premature labor with those of labor at term in the same case, showing a very decided advantage in premature labor It must be remembered, however, as Litzmann has clearly shown, that children born alive by this operation are far more likely to die early than matured children. The risk to the child does not cease with its delivery.

I cannot recall any reference in the paper to pelves contracted from hip-joint disease, and yet I have met with two obstetrical cases of this character during the past two years in this city; both were in private practice and both were primiparæ. The first case I saw in consultation, during a very severe labor at term, and delivered her of a still-born child by a difficult high (Tarnier) forceps operation. Premature labor was induced on the second case at the eighth month. In this case the bougie was retained under antiseptic precautions (2 per cent. creoline cervical and vaginal douche and iodoform gauze over os), between the membranes and uterine walls, for forty-eight hours without effect. It was then withdrawn, the douche again administered, and bougie re-introduced in a different position and retained for twenty-four hours again without effect. The sac was then punctured high up by the probe, and labor began in about fifteen hours. Thus we see the method of Krause, although the best, may fail, where puncture of the sac will not. As this lady was poisoned to death by an unclean servant who dressed and picked carious bone from her foot and then attended my patient, and handled all her linen, napkins, etc., without my knowledge, it shows the importance of extending our antiseptic precautions to everything coming in personal contact with the case.

As regards the method of delivery, the experiments of Budin and others speak strongly in favor of version and extraction, as opposed to forceps.

Dr. Kelly:—The subject is too large to be discussed formally; I will merely refer to one or two points of interest. A serious complaint is to be entered against the records of foreigners in regard to the statistics of infant mortality after premature labor. Many observers only state whether the child was born living or dead, some few state whether or not it was living when discharged from the hospital. What we want to know for practical purposes, is, whether the children live any time after they get home. My own experience is but few live. If they are sent out simply to die soon after at home, the induction of premature labor among the poorer classes simply becomes a species of uterine gymnastics.

A method of my own which I have found most successful in inducing premature labor, is taking a flexible whalebone bougie, introducing it between the membranes and the uterine wall, high up into the uterus, and sweeping it gently around for one or two inches in either direction. This has not failed me in any instance in bringing on labor.

Selected Articles.

THE EARLY STAGES OF MELANCHOLIA.

The term melancholia, as applied merely to a mental state, carries with it its own diagnosis. In its more special application, denoting a distinct mental disorder—a disease with a symptomatology of its own, running a variable course, but with a tendency to self-limitation, and of prognosis, usually favorable, the term must be used with greater regard for precision than the majority of general practitioners have been accustomed to apply it. States of mental depression may include more than simple melancholia, and hence, for present purposes, the chief interest in the diagnosis centres in the differentiating of a purely functional disorder from distinct phases of degenerative psychoses, or from the early stages of organic brain disease. Friends and physicians alike do not rest satisfied with a diagnosis which does not carry with it something of prognosis. This leads to certain considerations with reference to etiology, to which we may refer briefly later on.

There is perhaps no disease of the mind which is so often insidious in its onset, so deceptive to inexperienced observers in its course and gravity, so sudden in its occasional tragic and undreamed-of culminations. Mental elation, usually begin ning in harmless loquacity or in mere effervescence of spirits, is unable to conceal itself, but the melancholiac may, possibly from motives of consideration for friends, nurse in silence morbid fears and fancies or dangerous impulses long before the real truth is suspected. Hence the necessity for prompt recognition of this dangerous malady and for decisive and prompt treatment. It is stated by a writer of authority that "homicidal acts are not to be feared in simple melancholia unless in persons of bad character and ugly temper, or in those few cases with the symptoms in addition of moral insanity or impulsive insanity." I believe that this is dangerous doctrine, and whether the patient is to be treated at home or in an institution, the friends should be warned of the possibility of some sudden violent act. The

mind of the melancholiac is a sealed book to the outsider, and no one can safely ignore the possible existence of concealed impulses. If I were to formulate a caution, I should say never put implicit trust in the word of one suffering from acute melancholia, however intelligent or morally upright he or she may have been. I have known of a mother deliberately smothering her babe in bed by her side under the influence of a religious delusion. I knew an intelligent, religious and thoroughly honest woman to hang herself in the presence of a room full of sleeping companions, where she had begged to be permitted to remain in preference to returning to the customary night ward; and all the time that she was giving to the physician assurances that she had no thought of self-destruction, and that she had a full appreciation of the wickedness of such an act, she had in her possession the skein of yarn with which she strangled herself a few hours later. I knew, also, a gentlemen of education suffering from depression without delusions, a man scrupulously honest in his dealings with others, to yield to his impulses while enjoying parole to procure morphine and swallow it with suicidal intent. Such instances are included in the experience of every asylum physician.

The homicidal impulses occurring in connection with melancholia of alcoholic origin are especially apt to be of sudden onset, and are said to differ from those of simple melancholia in being more unconscious. In them the patient seems to lose his identity and to drift along like an automaton. A very good illustrative case is the following:—A young man of dissolute habits, who for some six months previous to the assault had been unnaturally moody and taciturn, a state which his friends attributed to the use of alcohol, one evening quietly entered the sitting-room of a hotel, where he stood for a few minutes with no apparent object in mind. Suddenly, without warning, he stole up behind an occupant of a chair and plunged a knife into the latter's neck. Dropping the weapon he ran to the river, into which he plunged without hesitation. He was rescued and taken immediately to jail, where he slept soundly all night. He had previouly been on good terms with his victim, and no possible motive for the crime could be conjectured. Upon his recovery, nearly a year later, he was able to recall vividly every incident of the assault. He asserted that he seemed to have, himself, no initiative in the act. A peculiar sense of buoyancy possessed him; he seemed, as he expressed it, as light as a feather, and to be borne along by some irresistible power outside of himself, which guided the blow. He threw himself into the river, not from remorse, nor with any realization af his crime, but with the same influence behind him, and a feeling of lightness which gave him full confidence that he would float on the water.

Simple melancholia developes slowly. The accustomed vigor gives place to a disinclination to return to daily duties; the patient tires easily, and sooner or later loses his powers of application; but there is not the sudden letting down of all the mental faculties, the total or partial abolition of memory, the confusion of ideas, the loss of sense of locality that marks the onset of organic dementia. The sufferer from melancholia complains of all of these, but in the midst of his confusion he is able to assert himself, and usually he is inclined to exaggerate ths extent of his helplessness. Many cases display no delusions—indeed, none are present. To wait for their appearance before pronouncing the patient insane is in many cases to incur great risk. Their presence or absence is more or less dependent upon the previous mental habit and training of the patient, and is not a test of perverted mental action. The intelligent man who is unable to lift himself out of the depression that swamps his energies may be as much out of harmony with his normal state as the one who ascribes such lethargy to the administration of poison by fancied enemies. Usually, however, there are vague fears, and often a distressing sense of impending evil.

It is important to distinguish between the early stages of melancholia and that form of mental depression which marks but one phase of a phychosis whose tendency is to chronicity, usually distinctly circular in type. Melancholia occurring at about the age of puberty should be regarded with suspicion, especially so if there is a history of previous elation. Occasionally the depressed stage comes first. The diagnosis is then even more difficult, and should be made with reservation. Usually, I think, the depression in circular insanity is more stuporous in form from the start, and, even when profound, not apt to give evidence of the presence of definite delusions. Such patients are apt to show an inherited neuropathic taint; as children they are often precocious, frequently self-willed and vain, and usually ambitious. They are peculiar and in a persistent state of unstable mental and moral equilibrium.

One or two illustrative cases will help to make clear some of these points. A young girl on returning from a sleigh-ride one evening seemed much fatigued, and on the succeeding morning looked dull and talked incoherently. This latter condition soon passed away, but for six months following she was restless, and occasionally made threats of suicide if not permitted to leave home. When brought to the asylum she was listless and inclined to lie on the sofa; was unable to frame satisfactory replies to questions, and ate only in response to urging. This proved to be but one phase of a chronic disorder marked by alternating periods of elation and depression. Another patient was committed to the asylum in a state of

quarrelsome elation, but for some time preceding this he had what his friend called "stupid spells," during which he would stand for hours at a time in a condition of insensibility to external impressions.

The early stages of paretic dementia occasionally exhibit a striking likeness to melancholia, as witness the following cases :—A male, age forty, suddenly became low spirited and emotional, apprehensive of injury and filled with unreasonable forebodings. He was particularly fearful of his house being blown up, and of himself and other members of his family burning. He was obliged to discontinue work, and steadily grew more and more depressed, eventually becoming extremely feeble physically. There was an admission of drink, but excess was denied. Bad hygienic surroundings in his shop and overwork were assigned as the cause of his trouble. He was brought to the asylum three months after the first appearance of depression. His pupils were then in a state of unequal contraction ; speech was altered and gait incoördinate, both of which latter conditions were possibly attributable at that time to his feeble state. So far as regards the mental symptoms, he presented on admission nothing different from an ordinary case of melancholia with active delusions of persecution, but, in addition to the changes in his pupils, speech and gait, mentioned above, there was noticed a lack of facial expression, and his bladder required catheterization. This man so far improved as to be removed by his friends six months after his admission. There were then no delusions, a slight mental weakness being the only noticeable feature. Three months later he was returned in a state of elation, with paretic symptoms well developed.

In a second patient, whose habits were good, the trouble was attributed to long hours and overwork. He became suddenly sleepless and unable to apply himself to work ; developed the delusion that he had committed some great crime, and that his children were to starve, and talked of suicide. Pin-hole pupils were obtrusively apparent, and the knee-jerk could not be elicited ; but with these exceptions there was nothing to suggest anything but an ordinary case of melancholia, with agitation. Subsequently there was retention of urine. Some weeks later, when he had become able to compose a letter, his handwriting showed unmistakable ataxia, though there was none present in the grosser movements of the upper extremities, nor in speech nor gait. Once he had an attack of profuse ptyalism, and on several occasions critical sweats. In a little less than seven months this patient was removed by his friends, free from delusions, cheerful, but without suspicion or elation, and, so far as outward experiences indicated, restored to health. So his friends considered him, and so he himself thought. The former were warned of the fears entertained by the asylum officers, and were instructed to regulate his life accordingly. He remained away eight months, returning with every evidence of paresis, and in a state of extreme optimism, out of which delusions of grandeur soon developed. Further details of the history are unnecessary here.

The third case occurred in a man who bore a good family and personal history. For six months preceding his admission he had lain in bed giving evidence of profound mental depression, and complaining of rheumatic pains when taken to task for his inactivity. On admission his pupils were insensitive to variations in light, though responding promptly to changes in accommodative efforts. He displayed an exaggerated knee reflex and a slight tremor of speech. Extravagant ideas did not obtrude themselves until four months following his reception at the asylum. To-day he presents all the typical features of paretic dementia.

We have gone into these cases somewhat in detail, extending the recital of their symptoms beyond the early manifestations of the mental derangement, merely to make more vivid the true character of the trouble, and to discover, if possible, some guide to differential diagnosis. In none of these cases was there any history of inherited neuropathic taint. So far as could be learned they were free from vicious excesses. All had been regarded by their family physicians as uncomplicated cases of melancholia, and their friends had been encouraged to expect a cure. The last one had endured the opprobrium attaching to a diagnosis of hypochondria. An examination a little more careful than certifying physicians are likely to find time to make was sufficient to determine a suspicion of organic dementia, which suspicion brief observation confirmed. As regards the purely mental phenomena exhibited by such cases, I know of no feature which would exclude a diagnosis of a purely functional disorder, and which might not occur in some one of a series of cases of melancholia. As to the physical aspects there are several points worthy of notice.

While an indifference to calls to empty the bladder is a by no means infrequent accompaniment of mental hebetude, a retention of urine to the point of actual stretching of the organ is not so common, and should occasion suspicion of paralysis of the viscus depending upon central causes. An examination for changes in the reflexes, or of the visual field, with possibly a resort to the ophthalmoscope, may render it possible to make a more certain diagnosis. For the sake of scientific accuracy, as well as for the credit of the physician himself, such cases should not be pronounced simple melancholia, and friends should not be deluded into false hopes of eventual recovery.

There is another class of cases dependent upon

organic disease where the prognosis is unfavorable and the diagnosis even more easily made. I refer to cases of melancholia associated with structural disorder of some other organ or organs, as, for instance, Bright's disease, with or without apparent vascular changes.

A clergyman who, partly by reason of certain native eccentricities of character, partly by reason of ill-health, had been forced to relinquish a number of successive charges had become discouraged and despondent. He withdrew to his family, where for a year preceding commitment to the asylum he lived a life of misery, which involved all members of the household. Despondency deepened into gloom, out of which delusions of a personal character gradually took shape. He became haunted with the idea of neglected duty. He became hypochondriacal, and occasionally had attacks of emotional disturbance. A train of dyspeptic disorders was attributed to mental causes, and the invalid never received the full meed of charity to which a knowledge of the existence of an organic disease would have entitled him. On his admission a somewhat hopeful prognosis was offered, which was later modified on the discovery of albumin and granular casts in his urine. The patient lived only four months longer, during which his sufferings were of the most miserable character, his delusions increasing in number and becoming reinforced by all forms of hallucinations. Death came in uræmic coma.

No cases are more exhausting to the physician's resources, or more taxing to his patience than those of mental depression depending upon hypochondriacal fancies. We are regaled with all sorts of subjective symptoms, possible and impossible, ill-defined or well described, within limits determined only by the patient's knowledge of his anatomy or his conversance with medical terms. It is hard to entertain sympathy with such, and the difficulties surrounding a satisfactory coping with their symptoms render it easy to do the patients injustice. I believe that it is the feeling among alienists that as individual experience with such cases accumulates, persistent hypochondria of an exclusively mental origin is rare. Again and again we see such cases developing, sooner or later, evidences of organic disorders of a character likely to impair brain nutrition. The depression of spirits, the often exasperating lack of fortitude, the childish displays of petulance, are not infrequently, I think, due to lack of inhibition depending upon starving or poisoned brain cells. In the absence of a clear history of excesses, structural disease of some one or more of the nutritive or excretory organs should be excluded in making a diagnosis.—E. A. Christian, M. D., in *Physician and Surgeon*.

NOTES ON THE PATHOLOGY OF PELVIC INFLAMMATIONS.

While the knowledge of the pathology of pelvic inflammation has greatly advanced in recent times, there is still a wide diversity of opinion among authorities regarding its causation, and the relative frequency with which the several organs and and tissues become involved.

This difference of opinion results from a difference in the methods of observation. Some have drawn their conclusions from clinical histories and from physical signs obtained by manual and instrumental exploration; others have made deductions from post-mortem examination; while quite recently a number have based their opinions upon the observations which they have made after abdominal section. To reach the facts requires prolonged and oft-repeated observation from all these points of view. One of the difficulties encountered in the observation, and one which has led to many differences of opinion in regard to the pathology, is that pelvic inflammations seldom come singly. Many of them come together, and so complicate one another that it is impossible to ascertain anything definite regarding the lesions, although investigated in every possible way.

It simplifies the subject and gives more definite results to consider separately the pathology of each form of inflammation which has been found to occur, and then to consider the groups which they naturally and actually form.

I. *Pelvic Cellulitis.*—This was at one time regarded as the most frequent of pelvic inflammations, but recent observations show that it does not take first rank in this respect. Extremists have hinted that it is very rare, and that when it does exist it is secondary to peritonitis, or salpingitis. As a matter of fact, it occurs independently of either of these inflammations, and in this respect may be considered a distinct and primary affection. It is generally caused by sepsis, or by gonnorrhœal infection derived from the vagina or cervix uteri, and transmitted to the cellular tissue through the blood vessels or lymphatics; or by contusions of the cellular tissues which cause extravasation and necrosis without any apparent extrinsic infection. These conditions are especially operative in the puerperal state but may be due to injuries received during surgical operations. Another known cause, although a very rare one, is the rupture of a vessel in the cellular tissue—a pelvic apoplexy. This does not necessarily cause inflammation of a distinctive character, and only does so, perhaps, when the blood is in a morbid state. These are the causes of primary cellulitis.

The course pursued by the inflammation is the same as in cellular tissue generally. It may end

in resolution or in suppuration, the size and location of the abscess depending upon the extent of tissue involved. Pus is almost always discharged through the vagina, occasionally through the abdominal wall, rarely through the bladder or rectum. In a few cases the pus has burrowed outward and upward to the sheath of the psoas muscle. If the abscess opens at its most dependent part evacuation and drainage are complete, and recovery is sometimes so perfect that not a trace of the former disease can be found upon examination either during life or after death. This fact has been used as an argument to prove that a cellulitis did not exist.

This is not the invariable history of cellulitis. Suppuration may continue indefinitely, because the evacuation is incomplete and the drainage imperfect, owing either to the location of the opening in the abscess, or to the fact that there is a large mass of inflammatory products honeycombed with small abscesses. In some cases the abscess wall is very thick and is a long time in disappearing after the sac has closed. This leaves a solid mass in the cellular tissure and some fixation of the uterus. This condition is called chronic cellulitis by some, but it bears the same relation to inflammation as do ashes and charred timbers in a building to an extinct fire. Most of the extreme modern pathologists diagnose this condition as tubal, ovarian, or peritoneal inflammation.

II. *Pelvic Peritonitis.*—This occurs as a distinct affection. Its presence alone has been recognized clinically and abundantly demonstrated post-mortem.

The cause of primary peritonitis is sepsis conveyed through the lymphatics which run directly from the vagina and cervix uteri to the pelvic peritoneum. In this respect the causes of pelvic cellulitis and peritonitis are somewhat alike. When there are superficial abrasions of the mucous membrane, the septic material in the vagina or cervix causes peritonitis, while deeper injuries, like lacerations, are prone to eventuate in cellulitis. This is only a possible explanation of well-known facts.

Among the causes of pelvic peritonitis are:

1. Certain constitutional conditions which predispose inflammation of serous membranes, the most notable of which are advanced renal disease and tuberculosis.

2. Rupture of the Graafian follicle, presumably having morbid contents.

3. Exposure and excesses.

The relative importance of these is not well established. The fact, however, is known, that inflammation of the pelvic peritoneum and the pleura occur as primary affections when the cause cannot be definitely discovered. Perhaps some pathological state of the blood may be responsible for the predisposition, and some unnoticed slight traumatism may be the excitant.

Secondary pelvic peritonitis will be referred to later. Pelvic peritonitis may be circumscribed or may involve the whole pelvic peritoneum. In the primary form the process, as a rule, ends with transudation and exudation, and rarely does suppuration occur, unless the cause is sepsis of a virulent character, or tuberculosis. If suppuration occurs, or if there is a large serous transudation, the pus or serum accumulates in the sac of Douglas, and is walled in, if the case does not end fatally, by an exudate which bridges over the sac of Douglas. If the walling-in is complete and protects the subject from fatal septicæmia, the pus is discharged through the rectum in all or the great majority of cases, unless evacuated by the surgeon. Adhesions take place where the inflamed surfaces meet. In mild cases these are generally limited to the abdominal ends of the tubes and their nearest neighbours, and to the most dependent parts of the peritoneum. Recovery follows, but is slow in all cases, and is seldom complete. The structures are more or less damaged by the exudate and adhesions, according to the extent of the disease, and in time the exudate and even the adhesions may be taken care of by absorption. The products of this inflammation have in the past been mistaken for the results of pelvic cellulitis. While they usually cause pain and discomfort and impair the functions of the pelvic organs, they do not tend to a fatal result, and generally yield to prolonged treatment.

III. *Salpingitis.*—This form of inflammation seldom occurs alone. Primary cases are due to tuberculosis, a hæmorrhage or occlusion of both ends of the tube. In the latter condition, the natural secretions accumulate and cause a limited inflammatory process. In the great majority of cases salpingitis is caused by endometritis, either catarrhal or septic. It is sometimes found to exist in the absence of all the other forms of pelvic inflammations which we have considered.

When caused by catarrhal endometritis, salpingitis ends either in recovery or in hydrosalpinx, which may in time excite pelvic peritonitis, or it may, by discharging into the uterus, end in recovery, but leave a more or less damaged tube. Again, it may remain and give trouble until the tube is removed by the surgeon.

When the cause is septic or specific, pyosalpinx usually results. This leads to other and serious complications and has no tendency to recovery, except when after repeated attacks or a single violent one of peritonitis the diseased tube is walled-in above, and, by disintegration of the opposing tissues below, it opens into the rectum or into the cellular tissue, and then finds an exit through the vagina or other pelvic viscera. This

does not always terminate the disease. Prolonged suppuration and septicæmia may cause a fatal termination.

IV. *Inflammation of the Ovaries.*—This occurs in a variety of forms, but there are only two which present distinct clinical histories: (*a*) The *acute*, which ends in suppuration, and (*b*) the *degenerative* or so-called *chronic* ovaritis.

(*a*) *Acute ovaritis.* Acute ovaritis is, as a rule, a secondary affection. The causes are puerperal and specific inflammations and neoplasms, and degenerative disease of the ovaries.

Ovarian abscesses found in connection with puerperal metro-peritonitis are familiar examples of the former, and suppurating ovarian cysts illustrate the latter. The termination of ovarian abscess is in death; at least that is the tendency—the abscess rupturing and causing fatal shock or peritonitis. The exceptions to this are when relief is given by the surgeon, before or at the time of rupture, and when the ovaritis sets up peritonitis before rupture and the ovary becomes walled up in the sac of Douglas. The abscess may also discharge through some of the pelvic viscera or be reached through the vagina or by abdominal section.

The important point to be observed in the pathology with reference to treatment is that there is a difference between these cases in which the diseased ovary is lodged in the sac of Douglas and walled-in by protecting exudate, and those that are not so guarded. This difference should determine whether the interference of the surgeon is to be immediate or delayed.

(*b*) *Chronic ovaritis.* This is characterized by histological changes rather than by the development of the products of ordinary inflammation, and is a very common affection. It has been claimed that it is caused by endometritis, the assertion being based upon the similarity of structure of the endometrium and the ovarian tissue and the fact that endometritis and this form of ovaritis coexist. Much might be said on this point, but time only permits me to add that this method of causation is not proven. As nearly as can be ascertained the cause is malnutrition, giving rise to certain degenerative changes, which in their pathological histology bear a much closer resemblance to hepatitis and nephritis than to the products of inflammation in connective tissues and in serous and mucous membranes. The ovary is peculiar in this, that each performance of its function entails a certain irreparable destruction of a portion of its tissue. It is an organ that is continually degenerating during its functional activity, and hence it is difficult to find the line of demarcation between the physiological destruction of tissue and the pathological changes which occur from inflammation—difficult, I should say, to all but those who have a proclivity to remove ovaries. Surgeons of that tendency find evidences of disease with a facility which startles skilled pathologists. Ovaritis of this form, in an ovary that is not displaced, does not tend to fatal results, and hence does not call for ovariotomy. In many cases the degenerative changes in structure lead to atrophy, arrest of function, and the disappearance of all symptoms. Such atrophied ovaries are supposed to be the site of neuralgic pain, which is so violent and persistent as to call for extirpation. This is not invariably the condition which causes pelvic pain, if we may judge from the fact that removal of degenerated ovaries does not always give relief.

Any of the inflammations here referred to may lead to one or to all the others—that is, the one, instead of running its course alone and uncomplicated, may excite secondary inflammation in any of the other organs or tissues. But either of them may occur alone, and they may all occur in succession, and even coexist.

Cellulitis often leads to secondary peritonitis, while peritoneal inflammation rarely extends to the cellular tissue. When such an extension occurs it is usually from burrowing of pus that has become walled-in, forming an abscess in the sac of Douglas. This takes place late in the progress of the disease and is sometimes considered a recurrence or relapse of the peritonitis. Along with the acute symptoms, which are lighted up by the burrowing of pus, come the physical signs of the cellulitis. When suppuration takes place in the cellular tissue it is often diffused and does not present a well defined pus sac as in primary cellulitis.

Peritonitis frequently damages the ovaries and outer end of the tubes, but it is seldom that a general inflammation of either is caused by peritonitis. When all of these coexist, inflammation of the tubes and ovaries occurs first, as a rule.

Looking at the subject as a whole, there are a few well-defined facts. The first of these is, that no matter where inflammation begins or what parts it involves, if the process gives rise to the formation of pus, the pus must be removed by the surgeon either through the vagina or by laparotomy in the majority of cases. Still another fact worthy of mention is, that in case the inflammation subsides before suppuration occurs, the resultant lesions are rarely improved by operative surgery—they do best upon general treatment.

By way of making more clear the foregoing statements in regard to the pathology, a word may be said about the lesions which remain or which may develop after laparotomy. The adhesions which surround a tube filled with pus and need to be broken up or divided in order to remove the tube, reunite, and more adhesions

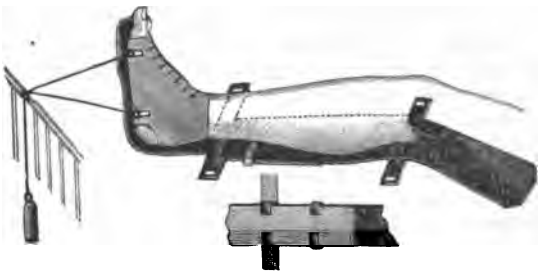
form. This is inevitable and must be tolerated; but when a laparotomy is done for the purpose of diagnosis or to remove an inflamed organ which is presumed to be offending, the lesions are seldom improved, and the suffering is not rendered less bearable to the patient.—A. C. J. Skene, M.D., in *Med. News.*

ON A METHOD OF APPLYING WEIGHT EXTENSION IN THE TREATMENT OF OBLIQUE FRACTURES OF THE TIBIA.

That oblique fractures of the tibia often present great difficulties in treatment is, I think, a proposition which no one will deny; and few will maintain that the methods of treatment in ordinary use are satisfactory in bad cases. To prevent the upper fragment of the tibia riding over the lower extension is necessary in some cases, and three forms have been used:—(1) Extension by means of screw attached to a movable foot-piece; (2) extension by means of elastic bands; (3) weight extension. Undoubtedly of these the equable steady traction of a weight has the greatest advantage, both mechanically and physiologically. Hitherto the great difficulty in using weight extension has been the absence of a satisfactory method of applying it to the leg. Messrs. Arnold and Sons have made, at my request, a splint which, I think, meets all requirements, and I have used it in several difficult oblique fractures with excellent results—results which are as good as those obtained in ordinary transverse fractures. The splint, as shown in the engraving, is similar to a Neville's back splint, but has a sliding foot-piece. The "purchase" for the extension is got from a padded leathern "spat" which is laced on to the foot. In applying the splint the spat is placed behind the heel, and the foot and leg are fixed in the usual manner, care, however, being taken that the bandage does not interfere with the free play of the foot-piece. The spat is then laced up, the splint swung from a cradle, and side-splints applied. Next, a weight of from 4 lb. to 8 lb. is attached to the spat by means of a cord and pulley. In the engraving the cord is seen to be attached to two pairs of rings, but in practice it will be found better to attach it only to the lower or posterior pair as then the line of traction is directly in the line of the long axis of the limb, and so the heel is kept down against the foot-piece and the fragments are made to drop into good position.

To illustrate the above I will quote one case in which I used this method while senior house surgeon at St. Bartholomew's Hospital.

W. B——, aged forty-two, was admitted into the Harley ward, under the care of Mr. Willett, on Aug. 11th, 1890, suffering from compound fracture of the left leg. The tibia was very obliquely fractured about its middle third, and the sharp end of the upper fragment was protruding about 1½ in. through the skin. Attempts at reduction under an anæsthetic failed until the tip of the upper fragment had been sawn off. The wound was irrigated with corrosive sublimate lotion (1 in 2000) and dressed with sal alembroth gauze and wool, and the leg put up on a Neville's splint and side splints, and swung from a cradle. No constitutional disturbance followed, and the leg was not interfered with for fourteen days, when on the removal of the dressings the wound was found to have nearly healed, but the position



of the fragments was far from good; in fact, the upper overlapped the lower by an inch, and it was not found possible to keep them in good position without extension. The splint above described was then applied with a weight of 8 lb., and the fragments came into good position within twenty-four hours. The weight was reduced to 4 lb. twelve days later. On Sept. 11th the fracture was found to be united in excellent position, and the wound healed, so a Croft's plaster splint was applied. The patient left the hospital three days later.

From the above and several subsequent cases of simple oblique fracture treated in this way I have every confidence that weight extension used with a splint such as I have described may be found useful in cases where other splints fail.—Holden, in *Lancet.*

ON PHYSIOLOGICAL TEACHING AND EXAMINATION.

The British system of examining medical students is still young and still capable of much improvement. In a previous issue we discussed the anatomical side of medical education. It is worth while to consider also the question of physiology.

It is no secret that a very large number of students—in fact, a good many more than half of the total number—are referred once at least in physiology. Nor is it in the least doubtful that the average pass man honors physiology with a larger share of his hatred than anatomy. Now this seems both strange and unfortunate. It is a pity that a study than which nothing can

be more interesting should fail to interest, and it is strange that a subject which affords so good a scope to all the little reason we possess should be less easily mastered than anatomy, which is to ordinary students a mere exercise of memory.

The causes of this state of things lie partly in the subject and partly in the way it is taught. Though physiology is undoubtedly interesting, it is as certainly intricate and difficult beyond the common run. There is hardly a single part of it in which principles almost fundamental do not lie open to revision. Each year brings a refutation of theories which have been honoured for a lifetime, and those who have sat under an original and inquiring lecturer know well the scorn with which he regards the crystallized opinion of an author, or possibly even of an examiner. There is also hardly a part of it in which it is possible to pursue a train of reasoning more than a little way without coming to an unknown point which bars further progress. Instances of the first difficulty will start at once into the memory. As an instance of the second, take the question of capillary resistance. It is unknown whether capillaries can actively contract or no, yet it is impossible to grasp the mechanism of the circulation without this knowledge, and opposed pathological theories are actually founded and maintained upon pure assumptions, either negative or positive, as to this unsettled point.

Another stumbling-block to the student is the immense mass of detail which he is expected to learn. What in the world is the use, even to an oculist, of knowing the various layers of the retina? Their turn may come, but at present they are a superfluity. Or what can a gynæcologist do with polar bodies? We have heard an examiner asking questions the practical bearing of which was remote, while failing to give any attention to physiological facts of the first importance.

There is no doubt that in this matter the examiners are to blame. Not only students, but their teachers, who are in a position to know, feel that they are liable to be asked minute details, both in histology and physiology. The result is that students cram this useless knowledge to the exclusion of the broader principles, till they cannot see the wood for the trees, and demonstrators, on whom falls the burden of preparing men for the examination, feel that they have to pack an infinity of small facts into their heads, lest the examiner should ask them something they do not know.

As at present carried on, our educational system is substituting the demonstration for the lecture. Lectures should deal with principles; demonstrations with the facts on which these are founded. There is a danger of insisting so much on students knowing the facts that they leave the principles unheeded. There is very little that is sure in physiology; there is a good deal that is probable; there is an immense mass of what is hardly more than ingenious conjecture. Of the first two classes, not by any means all bears upon the practice of medicine. Now, in a subject which, like physiology, possesses all the elements of education, engaging both observation and inference, there is no reason for requiring useless or uncertain learning, and, if no reason, then no excuse. If examiners would restrict themselves to what is both certain and useful, the education of the student would be far more satisfactory, and we venture to say the practice of the doctor would be every whit as sound.—*Br. Med. Jour.*

THE REGULATION OF PROSTITUTION.

This is a subject that has been very widely discussed and written upon in Europe during the last few months. The French have taken it up connection with the question of the depopulation of France. At the International Medical Congress Dr. Thiry (*Le Mercredi Med.*, August 20, and *N. Y. Med. Jour.*) of Brussels, read a paper on this subject, in which he states that prostitution, whether desirable or not, is a necessary evil; and that, if it were possible to suppress it, society would be afflicted by libertinism. Inspection is the sole way to protect prostitutes and those that use them from disease. In certain countries it is ignored, on the fallacious theory that it antagonizes liberty and the dignity of women. Another error is to regard prostitution as a crime. He considered that the regulation of prostitution is necessary to restrain the propagation of venereal and syphilitic diseases. Prostitution that attracts attention by the frequenting of streets, being the most powerful cause of propagating venereal diseases, should be forbidden, and it should be confined to registered houses, with frequent sanitary visits.

Dr. Kaposi said that in Vienna each prostitute receives a book containing a description and photograph of herself, and a copy of the laws relating to prostitution. No one under sixteen can be registered, nor persons afflicted with organic or constitutional disease. Sanitary examinations are made twice a week, all diseased women are put into hospitals, primary syphilitic cases are quarantined for three months, and kept under treatment for two years. Clandestine prostitutes are treated in the same way by their own physicians.

Dr. Nesser had examined 572 prostitutes in Breslau, and found the gonococcus in 216 patients.

Dr. Felix of Bucharest, Dr. Drysdale of London, Dr. Heinzinger of Groningen, and Dr. Crocq of Brussels, opposed Thiry's conclusions, particu-

larly the limitation of prostitution to a few public houses. Felix held that in the future we should instruct, without false modesty, the pupils of higher classes in colleges regarding the dangers to which they were exposed, and instruct them primarily on the various prophylactic measures. The criticism was made that this desideratum was possible, but would not "professor of coitus" be a veritable innovation for the end of the century?

In France, M. Commenge recently stated, at a meeting of the Academy of Medicine of Paris, that he had collected the statistics of the number of diseased prostitutes found in the decade from 1878 to 1887: First, among women registered by houses or cards; second, among those women that—though registered—were the objects of more or less frequent arrests, and constituted a special class under the name of *femmes du depot;* third and lastly, among the uninspected, or women that lived by clandestine prostitution. The result obtained, based on nearly a million visits, showed the number of cases of syphilis in each thousand examined to be respectively 3.1, 2.7 and 23.9. Of other venereal diseases 3.0, 2.5 and 14.5.

The crusade against the Contagious Diseases Act in England results in what would have been expected. From 30 to 40% of troops quartered in garrison towns, were on the sick list with venereal diseases, while during the enforcement of the law the proportion so affected was very small.

It is only by accumulation of such statistics that the fanatical sentiment against the regulation of prostitution can be overcome, and the health of innocent women and children protected.—*Boston Med. and Surg. Jour.*

ERYSIPELAS.

In your issue of the 21st ult. I noticed an article entitled "Pirogoff on Treatment of Erysipelas," in which is recommended the internal administration of camphor. Among other things he says: "Of all internal remedies camphor is the most efficacious."

I have never employed this remedy internally in this disease, but for the past few years have regarded it as a reliable, if not *specific*, therapeutic agent in its local treatment.

Since beginning its use I have constantly employed it in all cases of facial or simple cutaneous erysipelas with the most gratifying results. I usually employ a saturated solution of camphor and tannin in sulph. ether:

R.—Acid tannic . . . . gr. xlv.
Camphor . . . . . ʒiiss.
Etheris sulph. . . . . ʒij.

M.—Sig. Apply by means of a camel's hair pencil every three or four hours, until a white, impervious coat is formed

After this I apply it at sufficient intervals only, to keep this coating intact until the disease is completely under control, which is evidenced by a return of temperature to normal, arrest of its progress, and disappearance of the œdema of the affected parts.

If these cases are seen early, before the involvement of much integument, and the development of much constitutional disturbance, a few applications *invariably* cut short the disease. If much constitutional disturbance has already developed, as is often the case, before we are called, I usually administer aconite internally, and mild cathartics if constipation exists. If there is much anæmia, I sometimes follow this with the tinct. ferri chloridi.

I have been able to control the disease in *all* of my cases thus treated in from one to six days, according to the severity of the attack, and extent of the local inflammatory trouble, and I have always regarded the local application the principal (and often the only) agent in bringing about this speedy resolution. I have had the opportunity to test this local treatment in but one case of *erysipelas neonatorum* which developed in a child within a few hours after its birth, and seen by me within a few hours after its commencement.

It had already involved the whole of the face and scalp when I, in a state of hopeless despair, directed the paint to be applied every three hours, and made an appointment for the following morning. Upon my arrival I found head still almost twice its normal size, eyes tightly closed from the œdema, great constitutional disturbance, and erysipelatous inflammation extended down, involving the whole of the neck. Continued same application, and, upon the third day, disease was under control and patient discharged convalescent.

I look upon the remedy as almost a *specific* in this disease, and with the happy results of past experience, shall, with increasing confidence, investigate the merits of the claims of that distinguished surgeon.—W. H. Nuding, M.D., in *Times and Reg.*

FRENCH NOTES.

The various treatments of tinea tonsurans employed at the St. Louis Hospital:

I. Treatment of Bazin.—1. Epilation of the patches.

2. Lotions of sublimate, 4 to 1000.

3. The use of a parasiticide pomade of acetate of copper, of sulphur, or of turpeth mineral.

II. Treatment of M. Vidal.—This treatment forms the basis of the medications the most used at the St. Louis Hospital since 1888, when Vidal and Marfan demonstrated that the trichophyton

is a parasite found in the atmosphere, and that the principle of occlusion is one of the best means of destroying this growth.

1. Frictions with the essence of turpentine and applications of tincture of iodine on the diseased surfaces.

2. The application over the head of vaseline and iodine (4 to 100), then a bonnet of caoutchouc, or a leaf of gutta-percha.

III. Treatment of Ernest Besnier.—1. Keep the hair shaved during the duration of the treatment; epilation of a zone of 6 to 8 millimeters around the patches; remove, by means of a curette, all the broken hairs and diseased products accumulated around the patches.

2. Daily washing with tar soap, with salicylic acid or with sulphur.

3. Cover all the patches with emplastrum vigo.

IV. Treatment of M. Hallopeau.—1. Wash the scalp each morning with black soap; then, after having wiped dry, rub with the following solution:

℞—Camphorated alcohol, ... ℥ ivss.
Essence of turpentine, . . . ʒ vj.
Ammonia liquid, ... ʒ j.

2. Twelve hours later apply vaseline with iodine, 1 to 100.

3. Cover the head with caoutchouc for an entire day; apply the vaseline and iodine at night.

4. Shave the hair each week.

V. Treatmeat of Unna (of Hamburg).—1. Apply over the entire scalp the following pomade:

℞—Salicylic acid, ... grs. xxx.
Chrysarobine, ... grs. lxxv.
Ichthyol, ... grs. lxxv.
Simple ointment, ... ℥ iij.

2. Cover the head with an impermeable bonnet, which should be partially removed during four days for a new coating of pomade.

3. At the end of four days remove the chrysarobine pomade, and for three days friction with a pomade of ichthyol (5 per cent.).

4. Re-commence the following week a new period of seven days, and continue in the same manner until a cure results, which will take one month.

VI. Treatment of M. Quinquand.—1. Cut the hair very short with scissors, soap the head each morning with warm water, then rub with the following lotion:

℞—Biniodide of mercury, . . . grs. ijss.
Bichloride of mercury, . . . grs. xv.

rub in mortar and dissolve with

℞—Alcohol at 90°, ... ʒ x.
Distilled water, ... ℥ viij.

2. If necessary, the use of a curette; then, after using the lotion, the following may be applied:

℞—Biniodide of mercury, . . . grs. ijss.
Bichloride of mercury, . . . grs. xv.
Emplastrum, ... ʒ viij.

3. At the end of forty-eight hours, remove the plaster; soap the head; rub with the above lotion; renew the plaster, and thus continue until a cure is effected.

M. Quinquand has successfully employed the following pomade instead of the plaster:

℞—Vaseline, ... ℥ iij.
Chrysophanic acid, ... grs. xxx.
Salicylic acid, ... grs. xxx.
Boric acid, ... grs. xxx.

—*La Tribune Médicale—Times and Reg.*

THE COLD BATH TREATMENT IN TYPHOID FEVER.—Mr. F. F. Hare, M.B., resident medical officer of Brisbane Hospital, Queensland, contributes to the *Practitioner* a very well ordered study of the effects of cold baths in the treatment of typhoid fever. The number of cases dealt with is surprisingly large, and affords every opportunity for arriving at reliable statistical results. Thus a contrast is made between the cases treated during the sixteen months, August 1st, 1888, to Dec. 31st, 1886, on the "expectant plan," and those from Jan. 1st, 1887, to Dec. 31st, 1889, when the bath treatment was thoroughly carried out according to Brand's directions. The gross result was an improvement in mortality amounting nearly to 50 per cent. Thus on the expectant plan there were treated 568 cases, deaths 85, mortality 14·50; under the bath treatment 1173 cases, deaths 92, mortality 7·84. Dr. Hare points out certain fallacies which are likely to arise in every such inquiry, particularly those due to a too liberal extension of the term "typhoid," and those to the varying severity of the disease at different periods; and then discusses the special value of the treatment, the success of which is proportionate to its commencement early in the disease. He shows that the liability to intestinal perforation and hæmorrhage is unaffected, so that no reduction in the general mortality below 5 per cent. (the rate due to these accidents) can be expected. The greater liability of males to these complications gives a vastly better prognosis under the bath treatment to female cases; but at the same time he points out that in moderating the diarrhœa and sustaining the vital powers the patient is better able to resist the effects of hæmorrhage and "other not necessarily fatal intestinal conditions." Lastly, he affirms the position assumed by former advocates of the measure as to its chief effect in reducing mortality, for he says: "The vast bulk of the reduction in mortality is due to the prevention of those complications and modes of death which, which being more or less common to the febrile state, however induced, have been termed pyrexial. Thus (*a*) fatal pneumonia has been less than one-fourth as frequent, this being chiefly

due to the rarity of the bronchial form; (*b*) brain complications have been less fatal and brain symptoms (delirium, stupor, etc.) enormously reduced in frequency; while (*c*) it is no exaggeration to say that simple cardiac failure would have would have been practically expunged from the list had all the cases admitted come under treatment during the first week of the disease.—*Lancet.*

Duration of Pregnancy.—Oliver concludes, after very careful observation, that the duration of pregnancy in the human female varies as much as it does in the case of many of the lower animals. Issmer, reckoning only cases in which the fœtus was well developed, asserts that the duration ranges from 260 to 304 days. But Oliver believes there must be some error in this statement. If we reckon from the last menstruation, we must be careful to ascertain the exact date of the cessation of this, for it will be remarked that where the duration of the discharge varies little, the woman, when asked, is more likely to give the date of the beginning than the date of cessation of the last menstruation, and in this way mistakes may arise in our calculation to the extent of four or more days. The majority of authors are agreed that in reckoning the duration of pregnancy in woman, we ought to fix the probable date of delivery on the 278th day from the cessation of the last menstruation. He is of opinion that the best results will be obtained by ascertaining, first, the date of the cessation of the last menstruation, and then the usual duration of the inter-menstrual period in each given case; the number of inter-menstrual days should then be divided by two, and it will be found that the 260th day from the middle of the inter-menstrual period will most probably be the date of confinement.—*Liverpool Medico-Chirurg. Journal.*

Treatment of Convulsions in Children.—In a paper published in the *La Médecine Moderne*, December 18, 1890, the author calls attention briefly to the usual advice of at once removing the clothes of the child affected with convulsions before giving it a warm mustard bath, with cold applications to the head. The seizure is very apt to come from the digestive tube, and thus production of vomiting by tickling the soft palate, or the administration of an emetic may be of service, or a full dose of calomel or of castor oil may be administered. It should also be remembered that perhaps an intestinal parasite may be the starting-point of the convulsion, and that a vermifuge may be indicated. When there is cerebral hyperemia the application of leeches behind the ears may arrest the convulsion, or in very vigorous children bleeding may even be practised with success. Mustard plasters may be perhaps of value applied to the lower extremities, or even the compression of the carotids, as recommended by Trousseau. Inhalations of chloroform may produce relief, but it will be usually only transient, and a repetition of its employment is not without danger. Bromide of potassium combined with chloral is especially reliable when the convulsions are obstinate, 7½ to 15 grains may be given to young children, 30 to 60 grains to children a little older, and 60 to 90 grains to children approaching adolescence. To new-born children the dose of chloral should only be ¾ of a grain; to nursing infants 2 grains; 3 to 5 grains to children of two years of age, and 6 to 13 grains to children between seven and twelve years of age. When the convulsion has been subdued it would be well to continue the use of the bromides, prescribing bathing the head with cold water, general friction, lukewarm baths, and a strict regulation of diet. With this may also be combined small doses of calomel and the valerianate of oxide and zinc.—*Therap. Gaz.*

The Atmospheric Tractor—A Substitute for the Forceps.—Dr. P. McCahey, of Philadelphia, by invitation, was to have demonstrated on the manikin the use of the atmospheric tractor, but the manikin at hand was not suitable for this purpose, and he therefore showed the instrument, a kind of cup with handle made of thick, soft rubber, showed its tractile power on the head of the dead baby, spoke of its uses, and compared it with the forceps. The tractor which he exhibited covered an area of about five square inches, and exerted a force, when applied to a wet surface like the head of the newly-born, of from twenty-five to thirty-two pounds, or over one-third of the atmospheric pressure, which is fifteen pounds to the square inch. He claimed that the instrument could be applied with facility, furnished a sufficient amount of force to extract the child, was positively harmless, and could be used with perfect safety in both normal and abnormal labors. In normal labor it was employed to shorten suffering. Of course the os must be dilated to a size as great or greater than that of the tractor. The speaker had employed the instrument in about twelve cases, and had delivered in from five to twenty-five minutes, where nature would probably have required two hours or more.

With the tractor one could direct the head through the canal as might be desired, and one of its chief advantages was in prevention of rupture of the perineum. All objections to the instrument had been offered on theoretical grounds, and had not held in practice.

None of the gentlemen present who discussed the use of the tractor had had experience with it, but all seemed pretty generally of the opinion that it would be useful after the head had entered the pelvic canal, and in preventing rupture of the

perineum, but that it could not be applied at an earlier stage, especially in primiparæ, or, if it could, that it would not exert sufficient force to take the place of the forceps where this instrument had generally been indicated.

In closing the discussion Dr. McCahey extolled the tractor as a means of lessening the pain of labor, claimed that the objections offered during the evening did not hold in practice, that the tractor could be applied at any stage when the os was sufficiently dilated, and while not asserting that it could entirely take the place of the forceps, yet expressed the belief that it would do so in many cases where these instruments had been used in the past, and not infrequently had caused injury to child or mother.—*Med. Rec.*

RAPID CURE FOR TONSILITIS.—In the year 1872, a German woman, twenty-five or thirty years of age, was seized with a painful sore throat, or quinsy. She came to me for relief. Being poor and obliged to do her own house-work, she trembled at the prospect of a long disability. She was given fully two-thirds of a grain of morphine, with ten drops of Norwood's tincture of veratrum viride, which was taken on going to bed.

Knowing our text-books furnished no remedy or plan of treatment that would arrest the course of inflamed tonsils, and taught no way to prevent suppuration thereof, you can judge of my surprise the next morning, after breakfast, to see the patient well and up about her house-work. She was cured, and had no further treatment.

Some months or a year thereafter a robust coloured man, a porter on the Pulman cars, was seized with a sore throat, at Ogden. His run on the Central Pacific railroad from thence to his home in Oakland took two days. I saw him on the morning of the third day. He had fever, a flushed face, with tonsils swollen and painful, as usual.

He was put upon the following prescription, the directions being fully carried out:

Tinct. veratrum vir. . . .	30 drops.
Sulphate morphine	1½ grains.
Distilled water	6 drachms.

Of this one teaspoonful was to be taken every two or three hours, as needed.

This is five drops of veratrum and a quarter-grain of morphine in a teaspoonful of water as one dose. [Rather heroic treatment.—ED.] The next morning the patient was found to be up and dressed; he had had his breakfast and was smoking his cigar, his throat being entirely well. This to my great delight was a confirmation of the preceding case, described above.

Since then I have seen no case of pure tonsilitis that has not yielded at once to the above treatment in the same brief time—that is, from eight to twelve hours, and the patient is an invalid but one day after the beginning of the treatment.

If there is any meaning in the common word "cure," that meaning centers in these two words, viz., veratrum and morphine for tonsilitis.

How it is with other medical men I know not, but for me, in a practice of half a century, I know of no drug or drugs which have the power to control inflammation equal to these agents. They harmonize well together. The liability of nausea to follow the use of either of them alone is greatly modified by their combination. Hence there is reason to believe they exert therapeutic powers, when in conjunction, that are absent or lost when used separately.

The last case of quinsy the writer had to manage lasted five or six days. But the subject insisted upon being treated while attending to business. She was medicated at night, and what relief that period brought was lost during the day while she was teaching music. At last, seeing she could not get well on her feet, she lay by for twenty-four hours, took the medicine, and fuily recovered without the formation of abscess.—*Kansas City Index.*

TREATMENT OF CHOREA BY SALICYLATE OF SODIUM.—Dresch considers chorea as a microbic infectious disease; and, working from this idea, he has treated the affection for the past six years with salicylate of sodium, which in his hands he asserts has given better results than the classic treatment. The salicylate produces sedation by acting upon the gray central matter of the bulb and medulla. It calms choreic movements in the same way as it quiets the pains of rheumatism; moreover, from its soluble properties, it has the advantage of eliminating organic waste-products, and of preventing the auto-intoxications which they can engender. It is necessary to employ it from the appearance of the first symptoms, and to give it in fractional doses in a slightly alkaline solution for a period of eight to ten days. He completes the treatment in the following way: During the first period, enforced rest in bed, in an airy chamber of mean temperature, darkened and free from noise, the diet consisting of milk and bouillon; in the beginning, free purgation with calomel; later, lavements of warm solution of borate of soda. At the end of ten to fifteen days, if there has been an amelioration in the symptoms, he returns to the usual diet; light, noise and movement can now be tolerated. Baths in tepid water, hydro-therapeutics and appropriate gymnastic exercises complete the cure.—*Annals. of Gyn. and Ped.*

CHOREA.—The physician is often at his wits'

end to find some efficient remedy for chorea. Tilden claimed to have obtained great benefit by throwing a spray of ether for five or ten minutes along the spine, at the same time keeping up nerve nutrition by appropriate food and exercise. Clark, surgeon-in-chief of the police department in Newark, N. J., reported some time since in the *Times* an exceedingly aggravated case of chorea treated with entire success by antipyrine. Acting upon the hint, we have recently controlled in children from five to ten years of age serious forms of chorea with 5-grain doses of antipyrine, at first every four hours, and, as the condition improved, three times a day. Very likely there are conditions of the system which would prevent the curative action of the drug, but in these cases it was certainly very effective, acting as a positive curative agent. That this drug is something more than an antipyretic and antispasmodic is seen in its action in renal spasm, the result of calculi, in which it not only controls the spasms, but, continued in 5-grain doses for several days, causes the uric acid and the sand to disappear from the urine.—*N. Y. Med. Times.*

Sulphate of Zinc in Diphtheria.—The article on diphtheria in the *Medical Record* of February 28th induces me to report the success I lately had in that affection by the use of sulphate of zinc. On Sunday, February 8, 1891, I was called eight miles into the country to see two children supposed to have a severe cold with perhaps pneumonia. Upon my arrival they were found to be suffering from diphtheria, the one, a boy of nine years, having a temperature of 103° F., tongue heavily furred and a typical diphtheritic exudate covering both tonsils and all the visible portions of the mucous membrane of the palate and pharynx. The child had been sick three or four days. The other patient, a girl of 11 years, had been sick two days. She had a temperature of 100° F., tongue slightly furred, throat conjested, with one small patch of grayish exudate upon the right tonsil not exceeding a line in diameter.

The mother of the children had about a week or ten days previously returned from assisting in nursing the children of her brother, who resided some eight miles from them; five of her brother's children were sick of diphtheria and three of them died of it, the disease seeming to have been especially malignant.

As to the treatment of these cases details will be omitted. Suffice it to say that it was identical in the two cases, with one exception, viz., in preparing a gargle for the boy, who was so much worse off than his sister, the family all watching the procedure, it seemed appropriate that his treatment should be different, in some respects at least, from that of his sister, and for this reason was added to his gargle (an ordinary tumblerful of water) about fifteen or twenty grains of sulphate of zinc. Upon my visit the next day, my surprise was great to find that one half the membrane (diphtheritic) had disappeared from the boy's throat, while the diptheritic membrane in the girl's throat had enlarged to about half an inch in diameter, and the throat in every way looked worse. The same treatment was continued another twenty-four hours, at the expiration of which time the exudate had entirely disappeared from the boy's mouth and throat, while in the girl's throat it had again at least doubled in quantity, and the general appearance of the throat was much worse. Believing then that the zinc sulphate was entitled to credit for the boy's rapidly improved condition, the girl was supplied with a gargle identical with that which the boy had been using, and twenty-four hours later not only had the diphtheritic membrane disappeared entirely, but all the swelling and distress had gone also, and both patients were now convalescent and speedily recovered. No further opportunity for testing the efficacy of this remedy in diphtheria has been afforded. Whether future trials will give equally favorable results remains to be proven. Some corroborative evidence of its efficacy as an antiseptic in zymotic diseases has been afforded me in cases of exanthematous suppurating inflamations about the finger tips, in which it has since been tried, where its beneficial results were manifested very promptly. I consider the remedy deserving of a thorough test, and shall be happy to learn of its results in the practice of other physicians.—S. L. Kilmer, in *Med. Rec.*

The Blood in Pneumonia.—Dr. Kikodze has published in the *Bolnichnaya Gazeta* of Dr. Botkin some interesting observations on the blood during pneumonia. He found that during the course of this disease the white corpuscles increase in number to as much as double, or even treble, what they are in healthy persons. The increase is observed in the fully mature and over mature corpuscles rather than in the young ones, It is worthy of note that in fatal and very severe cases no increase in the white corpuscles is found. As a rule, however, the increase begins even before the physical signs of pneumonia are detected. It persists from that time onward without any great variations to the crisis, immediately after which it suddenly falls. It appears to be due to the reentry into the circulation of the corpuscles which have passed out into the alveolar spaces; hence probably the preponderance of over-mature corpuscles. After the crisis this preponderance ceases.—*Lancet.*

Observations on Certain Cases of Fatty Heart.—Dr. Clemow read a paper on this subject in which details were given of a case of fatty

heart associated with obesity and hepatic enlargement and severe dyspnœa. The treatment adopted and recommended by Dr. Clemow was rest at first, followed by exercise, Oertel's diet, restricted fluid, digitalis, and strychnia. The patient lost weight and girth and gained strength, being able to take long walks without breathlessness or other untoward result. Dr. Travers agreed with Dr. Clemow, but where there was high specific gravity of urine fluids must not be restricted.—*Lancet.*

ÆTIOLOGY OF BRIGHT'S DISEASE.—Dr. Agnes Bluhm has studied the apparent causation of all the cases of morbus Brightii and albuminuria that were treated in the Cantonal Hospital of Zürich, from the beginning of 1884 to July 1, 1889. The cases numbered in all 8442, and after a careful analysis lead to the following conclusions:—(1) The chief causes of acute Bright's disease are the acute specific fevers, and nearly all of these are liable to be complicated by nephritis. (2) The apparently uncommon occurence of chronic Bright's disease as a sequel of acute infective diseases is due partly to non-pathological causes, but also in some measure to the latent and therefore undetected course of chronic nephritis. (3) The occurrence of nephritis as a complication does not depend on the intensity of the primary specific disease. (4) The course of the primary affection and that of the nephritis complicating it are not mutually related.—*Pract.*

TONSILLITIS.—A robust colored man, a porter on the Pullman cars, was seized with a sore throat. I saw him on the morning of the third day. He had fever, a flushed face, with tonsils swollen and painful as usual.

He was put upon the following prescription, the directions being fully carried out:

℞.—Tinct. veratrum vir . . . 30 drops.
Sulphate morphine . . . 1½ grains.
Distilled water . . . . 6 drachms.

Of this, one teaspoonful was to be taken every two or three hours, as needed.

This is five drops of veratrum and a quarter-grain of morphine in a teaspoonful of water as one dose. The next morning the patient was found to be up and dressed; he had had his breakfast and was smoking a cigar, his throat being entirely well.—*K. C. Med. Index.*

BUTYL-CHLORAL IN NEURALGIA.—Dr. A. H. Hare, of Philadelphia, calls attention to the relative value and safety of butyl-chloral in the treatment of insomnia due to neuralgic pain. He found that functional insomnia resting upon no known cause yields very well to this drug, but insomnia due to any advanced systemic lesion, as in phthisis, is not relieved in every instance by its use. Neuralgia of other nerves than the cranial are rarely benefited by butyl-chloral; but it may give relief in such cases by combining it with ten to fifteen drops of the tincture of gelsemium. In true migraine with hemianopsia it is certainly one of the most useful remedies, given along with antipyrin and caffeine, cannabis indica and gelsemium. A great advantage possessed by butyl-chloral is the applicability of moderate doses in cases of heart disease.—*Philad. Medical News.*

The Yankee medical student has not very much to be thankful for. First of all, the medical "diploma mills" turn out their thousands of ill-trained and indifferently educated youths to take part in the professional struggle for existence, and then no kind legislature has interfered for the purposes of restricting the practice of medicine to native graduates. His woes, therefore, are tangible, but now Mr. McKinley has got passed a tariff, in virtue of which the tax on microscopes has been raised to 60 per cent., so that an instrument which costs ninety dollars in Germany will, wholesale, cost one hundred and fifty dollars in the States. This will hardly have for effect to stimulate microscopical work, and the cost will, of course, increase *pari passu* with the minuteness of the object to be magnified, seeing that the higher the power the greater the initial cost, and, therefore, the more crushing the protective duty.—*Hosp. Gaz.*

A VARNISH FOR METALS.—The following varnish will maintain its transparency, and the metallic brilliancy of the articles will not be obscured: Dissolve ten parts of clear grains of mastic, five parts of camphor, five parts of sandarach, and five parts of elemi in a sufficient quantity of alcohol, and apply without heat.

SIGNS OF MEDIASTINAL "GROWTHS."

An anxious look, and sometimes swollen features
And hurried pulse and breathing plague the creatures.
A sternal prominence, and heart displaced,
One-sided dulness by lung-note effaced
(Or, to explain more clearly what's intended,
Percussion dulness to one's side extended,
And meeting pulmonary note—is ended).
Aortic impulse gives a throbbing local,
And o'er the growth there's fremitus and vocal
Resonance increased; and there's a styolic
Murmur, threat'ning results more "diabolic."
There's bronchial breathing, and a strident rhonchus
When air is passing *in* or *out* a bronchus,
An impaired movement of thoracic wall,
And feeble breath sound, or no sound at all
O'er one particular lobe of single lung,
The "Reason Why" should not be left unsung,
And this I will explain without digression
A tumour blocks a bronchus by compression.
And mind! where'er the lung is much affected
Some signs appear, which should not be neglected,
Resembling strongly pleuritic effusion,
Whose *actual presence* may be no illusion.

THE CANADA LANCET.

A Monthly Journal of Medical and Surgical Science Criticism and News.

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AGENTS.—DAWSON BROS., Montreal; J. & A. MCMILLAN, St. John, N.B.; GEO. STREET & Co., 30 Cornhill, London, Eng.; M. H. MAHLER, 23 Rue Richer, Paris.

TORONTO, MAY, 1891.

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DRAINAGE.

The younger members of the profession in Canada have had the necessity of "efficient drainage" so worn into them during their student days, that it has become like second nature to them to secure it in all cases of operative surgery where fluids of any kind, septic or otherwise, are liable to collect. It may be said that fluids which are not septic are by many believed to be liable to become so when lying in any wound or cavity of the body, even though the strictest antiseptic precautions may have been taken.

Be this as it may, drainage is almost universal, but we believe is resorted to in the vast majority of cases simply because of the traditions of the recent fathers, and of habit, not because the operator, having thought out the problem, believes it necessary to prevent septic intoxication in the patient.

For if the pathogenic germ be so ubiquitous, that in an operation performed with "the strictest antiseptic precautions," it is believed to yet linger in the wound or cavity, or the discharges thereof, thus rendering the removal of such discharges necessary, how can it be possible that, by the formation of one or more inlets to that wound or cavity the said ubiquitous germ shall not, during the indefinite time of healing of the wound, have free access to it? Lawson Tait may be looked upon as the champion of drainage, while Sir Spencer Wells holds exactly opposite views. In 1885 he wrote, after an experience of 1,100 cases of abdominal surgery, that "drainage should be almost entirely discarded. . . . . I have not drained one case in which antiseptic precautions have been taken; and on looking back I cannot believe that there are more than two or three in which if a drainage tube had been used it would have been useful. The simple explanation is, that the mixture of blood, other fluids, and air left in the peritoneal cavity, or oozing into it after operation, formerly went through putrefactive changes, and if not drained off produced septicæmia, whereas now no putrefaction takes place, and absorption is quite harmless." In 1890, in the Bradshaw Lecture delivered by the same eminent authority, he deprecates even more strongly drainage as a routine, and indeed, if we believe in aseptic operations, then surely evacuation of the discharges is not only unnecessary but positively to be avoided, unless for the relief of tension. Serum and blood, if not septic, can surely do no harm by being absorbed, and indeed serum is very necessary for natural tissue repair. Asepsis in surgery has been a boon to mankind, but with all the changes that have been wrought in the routine of operations since the days of the carbolic spray, drainage has held its own. We are of the opinion that the next decade will practically see the end of the custom as a routine.

It is now on trial, and while it can never be entirely discarded, the disadvantages attending its constant use must necessarily limit its use.

THE MICROBE OF RHEUMATISM.

We are not aware that the profession as a whole look upon acute rheumatism as a disease caused by pathogenic microbes, and yet if we take into consideration the results of careful researches as to the etiology of this disease by renowned bacteriologists, we shall be almost obliged to come to the conclusion that it is a specific disease, and caused by the presence of such organisms. So far as we can learn, the earliest literature on the subject was by Dr. Alfred Mantle, who, in a series of investigations made in 1887, concluded to his own satisfaction at least, that the disease was caused by living organisms in the blood and serum of

persons affected. An interesting result of his investigations was the demonstration of lactic acid fermentation in sterlized milk, by cultivations of the bacilli of rheumatism, amygalitis, erythema, nodosum, and scarlatina. It will be a red-letter day for scientific medicine, when the exact relationship of the last-named diseases is clearly demonstrated. We all accept the fact that such relationship exists, but with rather hazy ideas as to its nature, the literature of the subject being very barren.

Since Dr. Mantle's investigations in '87 numerous other observers have studied the subject, with rather conflicting results. Quite lately Dr. Bardas has given definitely the results of his investigation in acute osticular rheumatism, and they certainly confirm those of Dr. Mantle. He has isolated and cultivated a microbe which when injected into the circulation of a rabbit caused endocarditis, with vegetations upon the cardiac valves. He is satisfied that this microbe will be found the specific cause of the disease in man.

ONTARIO MEDICAL ASSOCIATION.

The following are the titles of the papers to be read at the meeting of the above Association in June :

GENERAL DISCUSSIONS.

Medicine.—"The Cardiac Phenomena of Rheumatism," Dr. A. McPhedran, Toronto; assisted by Dr. Mullin, Hamilton; Dr. Henderson, Kingston; Dr. Gillies, Teeswater.

Surgery.—"The Cause and Treatment of Carcinoma," Dr. L. Teskey, Toronto; assisted by Dr. J. Wishart, London; Dr. Groves, Fergus; Dr. I. H. Cameron, Toronto.

Obstetrics and Gynæcology.—"The Treatment of Fibroid Tumors of the Uterus," Dr. Eccles, London; assisted by Dr. A. A. Macdonald, Toronto; Dr. Fenwick, Kingston; Dr. Mathieson, St. Mary's.

Ophthalmology and Otology.—"Points of General Interest in Otology," Dr. R. A. Reeve, Toronto; assisted by Dr. A. B. Osborne, Hamilton; Dr. Hodge, London.

Therapeutics:—"Modern Antipyretic Methods," Dr. Saunders, Kingston; assisted by Dr. McKay, Ingersoll, and others.

PAPERS BY GUESTS.

"The Surgical Treatment of Intussusception," Dr. N. Senn, Milwaukee. "Gynæcology for the General Practitioner," Dr. Howard Kelly, Baltimore. "Exploration of the Female Bladder," Dr. Jas. F. W. Ross, Toronto.

PAPERS.

"Pathological Weeping," Dr. A. B. Osborne, Hamilton; "The Surgery of Tuberculosis," Dr. G. A. Bingham, Toronto; "Pelvic Cellulitis," Dr. Gardener, London; "Deviations of the Nasal Septum," Dr. Price Brown, Toronto; "The Diagnosis of Typhoid Fever," Dr. J. E. Graham, Toronto; "Hæmaturia," Dr. Wm. Britton, Toronto; "Is Alcohol a Stimulant?" Dr. Arnot, London; "Epilepsy—the Results of Asylum Treatment," Dr. T. Millman, Toronto; "Short Notes on Injuries of the Skull and Epithelioma of the Larynx," Dr. Burt, Paris; "The use of Fluorescin and Pyoktanim in Ophthalmic Medicine," Dr. G. S Ryerson, Toronto.

REPORTS OF CASES.

Medical.—Dr. Campbell, Seaforth; "Acute Osteo Myelitis." Report of cases and exhibition of cultures, Dr. G. A. Peters, Toronto; "The Symptoms and Cause of Eye-strain, and its Diagnosis by the General Practitioner," Dr. Caldwell, Peterborough; "Injuries from the too long use of Pessaries," Dr. Hamilton, Atwood; "Hydrocele," Dr. E. E. King, Toronto; "Senn's Decalcified Bone-filling," Illustrated by presentation of patient and specimen, Dr. Oldright, Toronto.

Papers will also be contributed by: Dr. Wilson, Richmond Hill; Dr. Irving, Kirkton; Dr. Grasett, Toronto; Dr. Primrose, Toronto; Dr. A. H. Wright, Toronto; Dr. Buchan, Toronto.

MEDICAL EXAMINATIONS.

QUEEN'S UNIVERSITY.

James Brady, James W. Campbell, Andrew Carmichael, Sidney N. Davis, Edmund B. Echlin, B. A., William A. Empey, Ignatius J. Foley, John T. Fowkes, Robert J. Gardiner, William W. Genge, James F. Gibson, Samuel D. Green, Andrew Haig, M. A., Edgar D. Harrison, Dundas Herald, William J. Johnston, John T. Kennedy, William E. Kidd, Frank C. Lavers, George P. Meecham, John Moore, Allan E. McColl, B.A., John A. E.

McCuaig, Ernest H. McLean, Duncan M. Maclennan, James A. McLellan, J. Edwin Macnee, Janet Murray, John H. Oldham, Margaret O'Hara, Nelson Raymond, Edward B. Robinson, Michael D. Ryan, William J. Scott, James E. Spankie, William A. Stewart, B.A., Archibald J. Vallean, Janet Weir, James W. White, Arthur C. Wilson.

Herbert A. Parkers, Sarnia, has passed all his examinations and will obtain his degrees when he reaches the age of twenty-one years (a few months hence).

The hospital surgeons are: Messrs. Thomas H. Balf, Smith's Falls; Isaac Wood, B.A., Kingston; A. Lockhart, Kingston.

The first year silver medal was won by Walter T. Connell, Spencerville.

The Robson-Roose prize in Pathology was won by Andrew Haig, M.A., Meine.

The Rivers-Wilson prize in Sanitary Science and Jurisprudence was won by J. W. Campbell, of Toronto.

TRINITY UNIVERSITY.

Primary Examination.—Certificates of honor—C. B. Shuttleworth, first silver medallist; J. T. Robinson, second silver medallist; H. J. McGill; C. McPhail; R. V. Fowler; W. Glaister; R. Brodie; C. H. Bird; R. E. Macdonald; A. B. McGill; T. Douglas; E. Tomlinson; F. J Burrows; W. H. Cartwell; B. N. Coates; D. D. Wickson.

Class I.—W. Andrews; T. J. Dunn; R. E. Darling; J. K. M. Gordon.

Class II.—N. Campbell; E. Orton; R. S. Dowd; W. H. Tufford; J. R. Bingham; H. J. Denovan; W. Doan; J. C. Stinson; J. B. Ferguson; W. J. Ross; Miss M. M. Brander; J. J. P. Armstrong; W. J. Arnott; W. C. Belt; J. A. G. Wilson; F. W. Mulligan; Miss N. Rodger; T. W. Carland; W. A. Thomson; M. S. Lane.

Class III.—R. T. Corbett; J. H. Duncan; G. D. M. Ruthven; P. J. Maloney; Miss J. Ryan; W. J. Proctor; H. H. Alger and H. P. R. Temple equal; J. E. King; J. R. Rosebrough; J. Bowie; C. Carter; A. B. Singleton; N. Anderson; M. J. Farrish.

Final Examination for M. D., C. M. — Certificates of honor—J. Third, gold medallist; J. T. Fotheringham, silver medallist; C. Mackay and J. Sutherland and C. A. Temple equal; R. Knechtel; C. C. Fairchild; J. R. Walls.

Class I.—W. D. D. Herriman and T. C. Irwin and D. C. Jones equal; J. B. Martyn; D. Johnson; W. Montgomery; J. J. Moore; W. G. Sprague and R. H. White equal; G. D. Farmer and F. A. Quay equal; A. A. Sutherland; G. R. Mark and H. A. L. Reid equal.

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Class III.—W. E. Brown, Miss M. A. Griffin, A. E. Henry, W. A. Macpherson, J. T. Kennedy, F. L. Switzer, D. B. Alexander, A. W. Bell, F. E. Spilsbury, A. J. Murray, W. J. Awty, L. E. Bolster, D. B. Bentley, A. H. Hough, J. P. Russell,

M'GILL UNIVERSITY.

W. W. Alexander, A. H. Beers, R. Bennie, R. H. Berwick, R. A. Bowie, W. A. Brown, J. Busby, B. H. Calkin, C. M. Carlaw, J. C. Clemesha, John Clark, A. Dewar, W. A. Farwell, R. W. Fletcher, R. J. Gibson, E. A. Grafton, W. F. Hamilton, J. D. Harrison, M.A., W. H. Hattie, J. Hayes, J. Hewetson, D. B. Holden, B.A., E. J. Keir, C. I. Kelly, E. M. Lambert, A. Love, W. T. Lovering, A. I. Mader, C. G. Main, M. Mc Martin, W. S. Morrow, J. H. McMillan, J. A. McPhail, B.A., A. A. McCrimmon, J. C. McGuire, G. H. Parke, E. A. Robertson, T. F. Robertson, G. R. Shirriff, O. W. Sinclair, A. J. Sparling, J. R. Spier, C. F. Smith, T. H. Smith, W. Troy, C. A. Tunstall, N. M. Watson, R. E. Webster, W. P. Williamson.

WESTERN UNIVERSITY, LONDON, ONT.

L. M. Ardiel, J. M. Creighton, J. W. Leininger, W. O. Murray, J. P. Kennedy, T. J. McBlain, F. McCrimmon, H. McIntyre, T. P. McLaughlin, D. G. McNeil, L. Pelton, M. Sharp, H. Wilson.

THE FATHER OF A FAMILY INDEED.—Says *Annals of Hygiene*, Were it not part of the records of the Berks County courts, we could hardly credit the history of John Heffner, who was accidently killed some years ago at the age of sixty-nine. He was married first in 1840. In eight years his wife bore him seventeen children. The first and second years of their marriage she gave birth to twins. For four successive years afterward she gave birth to triplets. In the seventh year she gave birth to one child and died soon afterward. Heffner engaged a young woman to look after his large brood of babies, and three months later she became the second Mrs. Heffner. She presented her husband with two children in the first two years of her wedded life. Five years later she had added ten more to the family, having twins five times. Then for three years she added but one a year. At the time of the death of the second wife twelve of the thirty-two children had died. The twenty that were left did not appear

to be any obstacle to a young widow with one child consenting to become the third wife of the jolly little man, for he was known as one of the happiest and most genial of men, although it kept him toiling like a slave to keep a score of mouths in bread. The third Mrs. Heffner became the mother of nine children in ten years, and the contentment and happiness of the couple were proverbial. One day, in the fall of 1885, the father of the forty-one children was crossing a railroad track, and was run down by a locomotive and instantly killed. His widow and twenty-four of the forty-two children are still living.

THE PYREXIA OF PHTHISIS.—Dr. Williams writes on this subject in the *Br. Med. Jour.* Now that not a few of the profession think fever is not in all cases harmful, but rather helpful in the disease it accompanies, his words will be of great interest in regard to the pyrexia of phthisis. He says:

A natural question arises here: Is it advisable to reduce the pyrexia of phthisis at all? We do not thereby stop the tuberculous process; and as regards the wasting, I have shown elsewhere that pyrexia in phthisis is compatible with gain of weight, provided the diet be of a sufficiently abundant and nutritive character. In most cases the reduction of temperature is attended with a certain degree of comfort to the patient. But even to this statement there are exceptions, for occasionally patients, when the pyrexia is reduced by antifebrin or antipyrin, experience such uncomfortable sensations—chiefly of oppression—that they prefer the high fever to the effect of the antipyretic.

Two agencies which sometimes prove powerful antipyretics must be mentioned. One is confinement to bed. This I have seen by itself reduce temperature to the extent of 2° or 3° F. The other is sleep which will reduce temperature 2° and more at a time without any medicines. My conclusions as to the treatment of pyrexia in phthisis are:

1. The pyrexia due to tuberculization is best dealt with by derivative measures, such as counter-irritation, salines promoting secretion from other organs, and assisting expectoration.

2. That in the treatment of the pyrexia accompanying softening and excavation, measures which hasten these processes are found to be most successful, especially if combined with antiperiodics, such as quinine, salicin, or salicylate of sodium to moderate the fever.

3. That the use of medicines solely directed to lowering the temperature of the body without promoting increase in the natural secretions is generally inadvisable.

4. That our object in the treatment of phthisical pyrexia should be, not the reduction at all hazards of the temperature, but its lowering to the limits compatible with the comfort and well-being of the patients, and for this end that much may be done, in addition to the discriminating use of medicines, by the simple means of frequent food combined with stimulants and rest in bed.

MALFORMATIONS OF THE EXTERNAL EAR IN THE SANE, AND IN IMBECILES AND IDIOTS.—In order to determine whether abnormal formation of the pinna actually possesses such value as an indication of degeneracy as is attributed to it by many writers—notably alienists—Dr. Vàli (*Allgem. Wien. med. Zeitung, Br. Med. Jour.*), examined 500 healthy men, an equal number of healthy women, and several hundred imbeciles and idiots. Of the healthy persons, 26 per cent. males and 15 per cent. females had malformed pinnæ. Only 50 per cent. of the idiots and imbeciles had normal pinnæ. Amongst the numerous variations observed, Dr. Vàli found that prolongation and pointing of the tip of the ear were twice as common in the mentally defective class as in the sane; shortening, elongation, or bridging of the scaphoid fossa followed the same rule. Projection of the antihelix above the level of the helix was especially frequent in imbeciles; in idiots it occurred about three times more frequently than in sane persons. Partial or complete fusion of the helix with the antihelix existed twice or three times as often in imbeciles and idiots as in sane individuals. His observations further showed that in most cases the anomaly is bilateral; if confined to one side, that side usually is the left. It is rare for more than one species of deformity to exist in the same pinna.

TREATMENT OF CORNEAL ULCERS.—The Paris correspondent of *The Lancet* says: M. Valude, one of the ophthalmic surgeons of the Qqinze Vingts Eye Hospital, communicated to the Académie de Médecine on Feb. 10th a new method of

treating those troublesome cases—ulcers of the cornea—so simple in its application, and, according to its inventor, so successful in its results that it cannot fail to be generally adopted. Hitherto corneal ulcers complicated with hypopion have been treated by puncture either by the knife or thermo-cautery, this operation having frequently to be repeated, and too often leaving behind it opacities, if not actual staphyloma. For this unsatisfactory method M. Valude substitutes a simple dressing, consisting of a pad of salol gauze, which, with a moistened gauze bandage, effectually seals the eye and maintains a certain amount of compression. Before being applied the eye is carefully disinfected. The dressing is not renewed until after three or four days have elapsed, when the ulcer is found to be already healing, and the collection of pus in the anterior chamber much diminished. M. Valude states that the cornea tends to regain its original transparency without any opacities. In corneal ulcers, uncomplicated by hypopion, M. Valude, relying on his experience of fifteen successful cases, asserts that this new treatment is *the* treatment *par excellence*.

The Antiseptic Properties of Blood Serum.—In a paper read before the Société de Biologie, of Paris, Dr. Roger (*International Jour of Surg.*) reported some experiments which tend to show that blood serum has the property of greatly diminishing the virulence of microbes. As is well known, complete immunity against erysipelas may be conferred on animals by inoculating them with fairly virulent cultures of the erysipelas-cocci. One month after an inoculation Roger collected the blood of an animal experimented upon, as well as the blood of a healthy animal, and made cultivations of erysipelas-cocci upon the serum of both, for purposes of comparison. He found by microscopical examination that the cultures developed to the same extent, and in the same manner in the blood-serum of both animals, with the single exception that in the serum of the inoculated animal the chains of cocci were somewhat longer than in in the other. Rabbits were then inoculated with streptococci which had been cultivated upon the normal serum, and if the cultures were sufficiently virulent, death always took place from general infection. On the other hand, this result was never observed when the cultures used were taken from the serum of the inoculated animal. If less virulent cultures were employed, the cocci derived from the healthy serum usually gave rise to a moderate grade of erysipelatous infection, while those from the serum of the inoculated animals produced only small abscesses.

The Treatment of Infantile Paralysis.—The following is an outline of treatment of infantile paralysis recommended by Simon (*La France méd., N. Y. Med. Jour*). At first counter-irritation over the spinal column at a point corresponding to the origin of the roots of the nerves affected. For this purpose the least painful agents should be chosen. The functions of the skin should be stimulated at the same time by means of baths of hot water or vapor given in the bed. Chloral, aconite and conium may be employed to calm nervous excitement. After the first eight days, electricty should form the basis of the treatment. Simon uses a weak galvanic current, applying the positive pole to the shoulder and arm, the negative pole being placed in a basin of water in which the child's hand rests. The sitting should never last more than eight or ten minutes. At a later stage faradism may be used, always with the greatest caution. Among drugs, nux vomica is of the greatest service. A drop of the tincture is given twice daily at the two principal meals. At the end of ten days, or earlier if indicated, the nux vomica should be replaced by arseniate of sodium a sixty-fifth of a grain at a dose. The use of these two remedies alternately is to be continued throughout the case. Salt and sulphur baths are recommended, but only in the late stages of the disease. Above all, Simon enjoins us never to be discouraged, as the treatment must necessarily be very long.

Japan (says *The Times and Reg.*) is moving for the abolition of licensed prostitution," as some well-meaning, but bigoted fanatics (weak-minded men and strong-minded women mostly), term the Contagious Diseases Act. Meantime the prevalence of venereal diseases among the troops in England, that was very small while these acts were in force, has mounted to 30 and 50 per cent. since their abrogation. In France the ratio of syphilis in registered and clandestine prostitutes was 31 and 239 per 10,000, respectively.

ACUTE DYSENTERY.—Strong testimony as to the value of Dr. Roberts Bartholow's method of treating acute dysentery by a saturated solution of Epsom salts, is given by Dr. A. W. D. Leahy, of India. *Columbus Med. Jour.* He cites ninety-five cases with only two deaths. The solution is made as follows :

℞—Magnes. sulphat. . . q. s. to saturate.
Aquæ. . . . . fl ℥ vii.
Acid. sulphuric. dilut. fl ℥ i.—M.

Sig.—Tablespoonful in water every hour or two. until it operates.

Morphine, or starch enemata with laudanum, may also be used if indicated. Under its use fever, if present, disappears; mucus and blood are wanting in the stools, which become copious, feculent and bilious; the tenesmus ceases; the patient's anxiety diminishes; the skin acts well and sleep follows the administration of the first few doses. It is especially in the acute cases that sulphate of magnesia is so valuable; the more chronic the case becomes, the less apparent are the advantages of this treatment. After the stools have become normal in color and appearance, an ordinary mixture of acid with laudanum or tincture of cannabis indica is all that is needed to complete the cure.

FORMULÆ FOR PRURITUS.—The following are given by *La Semaine Méd.* for pruritus :

℞—Pure resorcin, ... ℥ j.
Glycerin, ... ℥ ij.
Water, ... ℥ iv.—M.
Sig.—For external use.

℞—Menthol, ... ℥ iij.
Glycerin, ... ℥ ij.
Water, ... ℥ iv.—M.
Sig.—For external use.

VOMITING OF PREGNANCY.—The following is highly recommended :

℞—Menthol, ... grs. xv.
Alcoholis, ... ℥ v.
Aq. dest., ... ℥ iv.—M.
Sig.—℥ss every hour.

LAPAROTOMY IN PERITONEAL TUBERCULOSIS.—Dr. Parker Syms says statistics show a very small death rate—three per cent.

Sepsis is not so likely to occur in these peritoneal cases as in laparotomy on healthy ones, on account of the pathological changes which have taken place in the membrane.

Tubercular infection of the wound does not occur.

Disinfectants are useless, and drainage should not be used, as it is likely to result in a permanent sinus.

In unsuccessful cases the operation at least does no harm. Most of the patients who have died at a time remote from the operation, have succumbed to general tuberculosis, or to a tuberculosis of some other organ.

Established—not advanced—pulmonary tuberculosis is an indication for, and not against the operation, for the improvement gained enables the patient to better resist the phthisis, and if this latter is but incipient, recovery may take place.

Laparotomy is the proper form of treatment for these cases. In some unknown way it exerts a most beneficial influence upon the disease, resulting in a cure in a large proportion of cases, and marked improvement in nearly all.

FRANCE (*Weekly Med. Rev.*) has one physician to every 3,000 people; Germany, one to 1,500, or twice as many; the United States, one to 600, five times as many as France; and California, that boasts of her climate and the good health of her people, one to 500, or six times as many as France. One year since Los Angeles had one physician to 301 of her people.

HYDROCELE. — Prof. John A. Wyeth says, *Practice*, always cures hydrocele by injections of pure carbolic acid. All the liquid must first be drawn off with an aspirator. About thirty mimims of carbolic acid is a sufficient quantity to sear the sack. This is not as painful as might be supposed. The first effect is to cause swelling, which soon subsides. In fifty operations two cases only have failed to be cured by the first injection.

THE CURE OF CANCER.—Says the *Med. Rec.*, Prof. Mosetig, of Vienna, announces that in pyoktanin or methyl-violet, he has found a remedy for cancer. He does not assert that any cases are quite cured yet; but the results have been so satisfactory as to lead him to think a cure will be found in the aniline dyes.

TREATMENT OF CHRONIC GASTRIC ULCER.—In a recent number of the *Lancet*, Dr. Robt. Saundby says:

As a general rule, I order at first half an ounce of milk and lime water every hour as the only food, with the sulphate of iron and magnesia mixture in purgative doses three times a day. Ziemssen and Leube use sulphate of soda or Carlsbad salt in purgative doses, with the object of removing all remains of food from the stomach; but I use this mixture simply to remedy the anæmia and constipation so generally present. If hæmatemesis actually occurs, or the patient is admitted with a very recent history of it, I order ice to suck, and feed per rectum for a day or two, and then proceed as before. When, as usually is the case, vomiting and pain cease under this treatment, I double the allowance of milk and lime water, then change the diet to soft bread-and-milk, getting on through pounded chicken to ordinary diet as rapidly as possible. The good results are attested by the table. It may be objected that these cases are not cured, but that there is only a temporary remission of the symptoms. I do not think this is true—although one case did undoubtedly relapse three times—as all these patient were made out-patients under me, and attended for a longer or shorter time, continuing to take the medicine. Had they relapsed it is most probable they would have reapplied for admission to this hospital, where, according to the rules, they would have been placed under my care. It may be thought that there is danger, by this plan, of exciting hæmorrhage, or causing perforation, but I think this fear is sufficiently answered by the record.

THE DRY TREATMENT OF CHANCROIDS.—The following treatment in use in the surgical divisions of Bellevue Hospital, New York, is recommended: After the prepuce has been retracted a small quantity of absorbent cotton is made to surround the penis just behind the corona, and is held in place by a rubber thread-band. The sulcus behind the glans is thus obliterated, and no longer forms a receptacle for secretions. The ulcerated glans is free from irritation, the prepuce being held back, and the cotton absorbs the exudation almost as soon as formed. The dressing can be changed as often as is necessary to keep the parts dry.

SPECIFIC TREATMENT OF TYPHOID FEVER.—Dr. J. H. Van Eman, in the *Jour. of the Amer. Med. Assoc.*, thus writes of the treatment of typhoid fever: Having concluded in 1889 that pathogenic germs cannot exist or increase in an acid medium, he at once began the treatment of his typhoid cases as soon as he was reasonably certain of his diagnosis, as follows: For the first 36 to 48 hours he gave calomel in 5 to 10-grain doses until he had very thoroughly cleansed out the alimentary canal, for the purpose of either sweeping out or destroying all germs that had not migrated from the intestine. While doing this he sterilized all foods and drinks, thus preventing the ingress of new germs. This being done, he put the patient on half-drachm doses of dilute muriatic acid in syrup and water, every three hours, day and night. In six cases thus treated all recovered. In all the diarrhœa was promptly arrested and never gave any further trouble; in fact some little attention was required to keep the bowels open. In no case did the delirium occur, neither sordes nor dry cracked tongue. In five of the cases the duration was under 21 days. No complication existed, and convalescence was uninterrupted and unusually rapid. The evening temperature did not exceed 103° in any case.

ALCOHOL IN ERYSIPELAS.—Dr. Stembarth, of Cracow (*St. Louis Med. and Surg. Jour.*), emphatically recommends the treatment of erysipelas by means of freely painting the affected area and adjacent apparently healthy zone with absolute alcohol. The painting should be made with a brush or cotton wool swab and repeated every two or three hours. Of twelve consecutive cases treated by the author after this simple, easy, safe and highly efficacious method, eleven recovered in two or three days. The remaining case (that of an extensive puerperal erysipelas of the lower limbs and lower part of the body) was cured on the tenth day.

ECZEMA IN CHILDREN.—Use a 5% lanolin and bismuth salve, thickly spread on linen, and bandage it upon the part morning and night. Lanolin forms but a small amount of fatty acids on the skin, while vaseline and other fats readily produce fatty acids which are very irritating to the child's sensitive skin.

THE ONTARIO MEDICAL ASSOCIATION.—The eleventh annual meeting of this Association is put down for Wednesday and Thursday, 3rd and 4th June. There will be the usual reduction of railway fares. By reference to another column the full list of papers, etc., may be seen. It is to be hoped that the members attending may be commensurate with the importance of the meeting, and the bill of fare as set forth. In our advertising columns will be found all necessary information for members and intending members.

BURLINGTON AND HURON DIVISION.—Owing to the resignation of Dr. Jas. Russell, of Hamilton, representative of above Division in the Ontario Medical Council, an election to fill the vacancy will be held in May, 1891. See the Registrar's advertisement in another column.

Books and Pamphlets.

TEXT-BOOK OF MATERIA MEDICA FOR NURSES. Compiled by Lavinia L. Dock, Graduate of Bellevue Training School for Nurses, Superintendent of Grace Memorial House. New York: S. P. Putnam's Sons. Toronto: Carveth & Co.

The work of compilation has been well done. Now that the study of Materia Medica is made a part of the course in nearly all training schools, the work is timely, and will be invaluable to both teachers and students in this field. There is no attempt to do more than discuss the main points concerning the most commonly used medicines, therapeutics being wisely left entirely alone. The symptoms of poisoning and antidotes are given for many common drugs, as also a table of comparison between minims and drops. The work is one which every nurse engaged in her profession, should have constantly at hand.

APOLOGY.—On account of pressure on our advertising pages, we have been obliged to utilize space generally devoted to reading matter. Our readers will kindly bear with us.

1891.

Medical Council Election for the Burlington and Home Division.

Extracts from the By-Law for conducting the Elections of the Medical Council of Ontario.

Election to take place on the 27th of May, 1891.

"THAT any member of the College of Physicians and Sugeons of Ontario presenting himself for election as a representative to the Medical Council for the Territorial Division of Burlington and Home, must receive the nomination of at least twenty registered Practitioners resident in such Division, and that such nomination paper must be in the hands of the Returning Officer for the Division not later than two o'clock on the afternoon of Wednesday the 13th May, 1891.

"In the event of only one candidate receiving such nomination, it shall then be the duty of the Returning Officer to declare such candidate duly elected.

"That the Registrar shall send to every registered member of the College entitled to receive the same, a voting paper (in accordance with residence given on register) by Wednesday the 20th May, 1891.

"Any member of this College not having received a voting paper by Wednesday the 20th May, 1891, when more than one candidate has been properly nominated for the Division of Burlingtou and Home, will send by post to the Registrar his or her name and address, and a voting paper will be forwarded at once for the Division."

Certified a true copy of extracts from By-law passed by the Medical Coucil of Ontario.

By order,

R. A. PYNE, *Registrar*,

College of Physicians and Surgeons of Ontario,
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THE CANADA LANCET.

A MONTHLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE, CRITICISM AND NEWS.

VOL. XXIII.] TORONTO, JUNE, 1891. [No. 10.

Original Communications.

ON THE TREATMENT OF DIABETES.*

BY A. J. JOHNSON, M.B., M.R.C.S.E., F.R.M.S., F.O.S. LOND.

Mr. President and Gentlemen,—The constant desire that must exist in the mind of every general practitioner to find some remedy or remedies for the cure of Diabetes Mellitus, has prompted me to bring before you the results that I have obtained with one or two comparatively new remedies. Not because I believe that any one of these remedies that I am about to speak of will prove curative in all cases, but because I think that one at least possesses advantages over those more commonly in use, in being perfectly harmless when pushed, and unirritating to any stomach.

Whether diabetes is the result of cold, as has been shown by Pieper of Greifswald, or of a certain condition existing in the liver, as is claimed by Zimmer, or from the production of too small an amount of carbonic acid in the tissues, or from any other cause, the symptoms as we all know are much the same, viz., loss of flesh with increased appetite, increased thirst, polyuria and glycosuria. And we all know further, that these symptoms are more or less relievable by the avoidance of all articles of diet which contain starch or sugar. As we might expect, if we exclude the carbohydrates, less sugar will be found in the urine, if only from the fact that the glycogenic function of the liver must be influenced by the composition of its blood supply.

The difficulty, however, of inducing patients to restrain themselves in these particulars, is one of the greatest difficulties experienced in the treatment of these cases, as, from the very nature of the symptoms, we see that we must ask our patients to desist not only from partaking of those things for which they have a natural liking, but from those, the desire for which is greatly increased, by the very disease that we propose to treat. Therefore, if it is possible by any means to treat these cases without restricting their diet, we will have succeeded in overcoming one of the greatest difficulties that we have to contend with. Nor can any treatment be said to be very satisfactory, until we have succeeded in producing our best results by the exhibition of the remedy under the ordinary every-day circumstances, under which our patient exists. For otherwise there is little or no proof that that good obtained is not the result merely of the restricted diet, knowing as we do that in a great many cases this of itself is sufficient to produce the most beneficial change.

Now, speaking of diabetes generally, that is, without taking any note of the cause in any particular patient, the chief means which it is generally conceded we have at our disposal with which to control the disease are—diet and opium. The first cannot be continued for any length of time without producing such disgust in the mind of our patient, that it is eventually abandoned. The second, if continued long enough, must result in the acquirement of a habit which eventually drags our patient down to the miserable condition of a hopelessly confirmed opium eater, and at all times increases the probability of producing that most dangerous of all symptoms in this disease—diabetic coma; a condition which it has seemed to me may result from a combination of the acetone with urea, when that urea would, under other circumstances, have been found alone. It is easily seen, then, how great the value of a remedy for diabetes would be that had none of these objections.

The first remedy that I would particularly draw your attention to is the Rhus Aromatica. This is the common fragrant or sweet sumach, or "stink bush," which grows in this country and the United States, and must be well known to many of you. It is a shrub, about two to six feet high, with a yellow flowering top, and grows on high rocky soil. The preparation that I have used is a fluid extract of the bark of the roots, made by Messrs. Parke, Davis & Co., of Detroit.

My attention was first drawn to this plant by reading an article on its uses, published by J. T.

* Read before the Ontario Med. Association, June, 1890.

McClanahan, of Brownville, Mo., in 1879, in which he stated that his father and grandfather had been in the habit of using the bark for very many years as a remedy for diabetes, and in which he went on to detail the effects he himself had obtained. These were so encouraging, that I decided at once to give it a trial in a case that I was treating at that time that was giving me a good deal of anxiety. As it is in this case that I have had the best opportunity of studying what I take to be the effect of this remedy, it may be well here to give you a short sketch of it.

The subject of the disease was at that time a lady of sixty-one years of age, above the average height, stout in proportion, who for some time had been under some form of treatment without improvement. She had always lived well, and had been accustomed to eat and drink those very things which were most likely to increase the condition from which she suffered. Therefore, although there was a history of exposure to cold before the attack came on, still, from her general appearance, and from further study of the case, I made up my mind that the carbohydrates, instead of going to form fat, and contribute to force production, were now being excreted as glucose—that the glycosuria, in fact, was of the alimentary kind. She had constant and unquenchable thirst, was losing flesh at the rate of five pounds a week, although her appetite was particularly good, and she was passing an unusually large quantity of water even for a diabetic. The sugar excreted amounted to more than 1600 grains, or about 3¼ ounces per day.

In this condition I put her upon the Rhus treatment, beginning on July 9th, 1883. She continued to lose flesh for a week or two after the treatment was begun, but very shortly, the thirst grew very much less, the excretion of sugar improved, the amount of water passed grew rapidly less, till it reached a little above normal. I tried to restrict her diet, but found it of little use; but I continued the treatment more or less, always with the same result however, viz.: whenever the treatment was discontinued the old symptoms reappeared; when it was again persisted in for a week or two, they as regularly improved. On her return from a visit to the salt water, she was much improved, so much so, that it was thought that she had quite recovered. But as the cooler weather came on about November she complained of drowsiness, with inability to sleep at night. Her conversation was rambling and disconnected, with a decided difficulty in pronouncing certain words. The medicine had been discontinued and the sugar had again appeared in the water, though the thirst and polyuria had not returned. These symptoms increased till she became almost comatose, in which condition she remained for about a month. She took fluid nourishment when it was given to her, at times partly waking, always with the idea that she was away from home, or with the remnant of some horrible dream firmly impressed upon her mind.

As, up to the time of the appearance of the coma, she had been taking a mixture of bromide of potash, chloral, and syrup of codeia, to obtain sleep at night, I attributed the character of the dreams to the use of these drugs. But these hallucinations and illusions continued for weeks after I ceased giving this mixture. Her convalescence from this attack seemed to date from a time when, after having given a full dose of hydrarg submur., I followed it for some days with saline purgatives. She now rapidly regained her former position of health and continued so during the summer. And when, in the following autumn, I saw again this cloudy condition of the intellect returning, I sent her off to the Bahamas, still continuing the same treatment. Her medical man at Nassau continued the treatment for some time, then left it off, and wrote me, saying that he thought her well. To all appearance she was so, but on her return here the following spring, she had a sharp attack of the pruritus vulvæ peculiar to diabetics, which however immediately disappeared on the use of Goulard's Extract. She was eating everything, but was not taking any beer or spirit. She continued very well for two years, until she got a severe chill while going up the Saguenay. On her return here many of the old symptoms were present, and she showed every sign of another attack of coma coming on. I again resorted to the Rhus with the salines, having first given a full dose of the submuriate. The attack completely passed off in ten days. From that time to the present she has had no return.

On May 10th of this year I examined the water with the following result:—Sp. gr. 1025. Picric acid test and Moore's test give negative results.

Trommer's test first gave a negative result, but in another specimen showed a trace of deposit, though this had not the characteristics of sugar.

My patient now tells me that she is perfectly well, that she sleeps well, never being disturbed at night; that she has no pruritus, and has not had for a very long time; that she is up to or above her usual weight, and is able to walk as far and with as much ease as she could some years ago.

Another comparatively new drug in the treatment of diabetes mellitus is "Jumbul seed." The Jumbul is the Java Plum, and is common all over the East Indian peninsula. I find very little reported of the use of these seeds, and what there is is not very promising. In the *British Medical Journal* for 1887, one case is reported, and a few more in the London *Lancet* for the same year. In all these cases there seems to have been decrease of the amount of water passed. No case is reported as having been cured, but all were more or less relieved by the treatment. In all, however, except the first, the patients were put on a restricted diet.

In the only case that I know of in Toronto, in which this drug was used and persevered in for any length of time, it did not arrest the disease, nor was it found to produce any marked change in the symptoms. The quantity of sugar never materially lessened, nor did the amount of water decrease, though it is only right to say that polyuria never was a prominent symptom in this case at any time.

The treatment of diabetes by free phosphorus was suggested a year ago by Dr. Balmano Squire, of London, and bids fair to be of great value. I have recently had an opportunity of trying this drug, and the results are, so far, encouraging, but by no means as brilliant as those obtained by Dr. Squire. This may, however, have been due to the fact that I had to give the phosphorus in the form of granule, and it may not have been dissolved in the stomach. In Dr. Squire's case he gave $\frac{1}{30}$ of a grain dissolved in olive oil, in a soft capsule, three times a day, and the quantity of sugar excreted fell in the first week, from 25 to 7 grains per ounce of the water passed. The case which I have at present under this treatment is in a man of 48 years of age, who first noticed symptoms of diabetes about a year ago. At that time he lost flesh rapidly, which, however, has been partly regained. On the 25th of April of this year, I found that he had constant thirst; was passing about 160 ounces of water in the 24 hours; that the water contained about 24 grains of sugar to the ounce, so that he passed in the neighborhood of 8 ounces of sugar per day.

On May 1st I began the use of the phosphorus, ordering $\frac{1}{60}$ of a grain in pill three times a day. This was continued for three days, when the dose was doubled; $\frac{2}{60}$ being taken after each meal. Then in four days $\frac{4}{60}$, and in a day or two afterwards $\frac{5}{60}$ or $\frac{1}{12}$ of a grain of phosphorus was taken three times a day. After ten days, in looking over the daily record, I find, 1st, that the water is reduced to two quarts. 2nd. That there is some slight improvement in the thirst. 3rd. That he is still dull in the mornings but otherwise is very well. With regard to the quantity of sugar passed, on the whole it is less, but there has been no regular and continuous fall in its quantity. It varies very much on different days, falling once to 8 grains per ℥j, and rising at another time to 34 grains, but the daily average was in the main reduced by at least 5 grains per ounce. For the next two weeks all the symptoms improved. The quantity of water was reduced to three pints in the 24 hours, though this might have been partly accounted for by the increasing heat of the weather. The quantity of sugar excreted was less, that is, the average per ounce was less, and this, taking into consideration the lessened amount of water passed, has reduced the daily weight of sugar to about one ounce.

The result so far, as I said before, is encouraging, as the patient has improved in all his symptoms, and the daily amount of sugar passed has, after one month's treatment, fallen from 8 ounces per day to about 1 ounce. At this stage I suspended all treatment for ten days. When I again saw my patient his symptoms were much as they had been when taking the phosphorus, but the sugar had increased, and showed an average of about 24 grains to the ounce—exactly the amount that existed before treatment was begun. As I had by this time secured the phosphorus "perles," as they are called, from Messrs. Parke, Davis & Co., who made them for me, I at once began to give them, again beginning with the smaller dose of $\frac{1}{30}$ of a grain and gradually increasing it.

[*To be continued.*]

RUPTURED PERINEUM.*

BY CHAS. M. SMITH, M. D., ORANGEVILLE, ONT.

The subject of my paper is one that may be considered hackneyed, but is, nevertheless, of vital importance, both to the patients so affected and to the general practitioner. It is from the standpoint of the latter that I introduce the matter, as it would be "carrying coals to Newcastle" were I to dilate on such a casuality before a meeting of specialists. I have come across practitioners of thirty years' standing who stoutly denied that they had ever had a case of lacerated perineum; but, gentlemen, we all know that there are none so blind as those who will not see.

I shall first give a brief synopsis of cases that have come under my observation, closing with a few remarks on the cause, prevention and treatment of the injury.

Case A.—Was an illustration of Capulet's aphorism, namely, "Too soon marred are those so early married." A primipara, aged 16, in labor 15 hours; liquor amnii escaped; livid arm protruding from the vulva, the latter as well as the perineum discolored and devoid of natural secretion, owing in a great measure to the prolonged efforts of the sagacious attendant (a rural *sage femme*) to deliver the fœtus by pulling on the arm. A tedious recovery followed the delivery, which was effected with great difficulty by podalic version; the subsequent sloughing laying bare the sphincter ani.

Three months afterwards, pared the surfaces by means of tissue forceps and scissors, brought them in apposition with silver wire sutures (six in all), three vaginal and three perineal, introducing the former from above downwards, the latter from below upwards, or in other words, those nearest the sphincter ani being introduced and tightened first when operating on the perineal surface. Union was perfect, although I was unable to see patient oftener than every alternate day. A daily evacuation of the bowels was secured by enemata, while the patient was allowed to micturate while on her knees in bed.

Attended same patient in next confinement: presentation vertex l.o.a., perineum remained intact.

Case B.—A primipara, presentation vertex, 4th position. Attempted to rotate occiput anteriorly by aid of bipolar manipulation, but was forced to apply forceps, as the uterus, *partly emptied of its contents, failed to respond by contracting.*

Patient was in the left lateral position; a sharp and sudden contraction took place, she drew her knees up to the body, whilst the nurse, instead of resisting this action, separated the thighs widely at the same moment. Suddenly the tissues gave way with an audible report, and the head escaped; a laceration took place involving the perineum, posterior wall of vagina, and perineal body. Primary operation with sutures of silk in the vagina and wire on the perineum failed, owing perhaps to constitutional causes, as she subsequently exhibited symptoms of infection by syphilis, the infant subsequently dying of syphilitic marasmus. A secondary operation, six months afterwards, resulted in a partial success, affording the patient a degree of control over evacuations, which had formerly been almost involuntary if at all relaxed.

Case C.—Was also a primipara, who had loved "not wisely but too well," 33 years of age, and of masculine conformation. Liquor amnii escaped early, the perineum on my arrival was distended, hot and dry; head presented in fourth position. With considerable difficulty I delivered the child by aid of short forceps, and only by utmost care and attention to lubrication of genitals and the preservation of the extended position of thighs did I succeed in preventing a laceration exceeding one inch in extent. Four sutures of iron-dyed silk were at once introduced by the aid of ordinary full-curved needles, while an antiseptic injection of carbolized water (previously boiled) was ordered to be used three or four times daily. I removed sutures on seventh day, perfect union having taken place.

Case D.—A primipara was delivered by long forceps (Barnes' improved) in the dorsal position, thighs flexed and knees separated; the only abnormal condition present being the shortness of antero-posterior diameter of outlet and disproportionate breadth of ano-coccygeal perineum. A laceration occurred involving about half an inch of the vaginal and three-fourths of an inch of the perineal surface. A very profuse leucorrhœa prevented me from attempting the primary operation. I waited six weeks, and operated, using three catgut sutures

* Read before the Ont. Medical Association, June 1, 1890.

and three silver wire sutures, the former lying within the vagina, the latter being secured by perforated shot, which lay close together on the perineal surface. This patient lived in town, and was under the care of a moderately well-qualified nurse, so that although affected with atony of bladder and requiring catheterization every eight hours, she progressed favorably to recovery. Bowels were kept regular by aid of pulv. glycyrrh. co. and enemata. The result was all that could be desired, although convalescence was retarded by hasty removal of patient to another room during great excitement caused by a fire in the building.

Case E.—Had a previous miscarriage at third month, and had reached term in second pregnancy. She resided ten miles from town; and when I arrived the liquor amnii had escaped, while the pains had been strong and frequent for a period of about seven hours. Occiput was almost directly in the hollow of the sacrum, and I barely succeeded after placing patient in genu-pectoral posture, in rotating head to first position. Patient was extremely nervous and unmanageable; the attendants fearful of chloroform, allowed her to inhale just sufficient to make her restless; the consequence of which was that with the final expulsive pain, until which all had gone well, she drew up the thighs, abducted them strongly and induced a slight tear of perineum. After delivery I introduced three sutures of ordinary linen thread, previously soaked in a sublimate solution; removed them the 6th day and found union complete. In this case also, bowels were kept relaxed and the urine evacuated while patient knelt over the vessel on the bed.

Case F.—A primipara, æt. 40, labor powerless, head presenting in fourth position. Short forceps were applied by consulting practitioner and direct efforts at traction used. I advised patience and at the same time suggested that the operator pay attention to the arc described by the handles at each pain. In the course of a few minutes, the head assumed the second position and delivery was effected. My attention was drawn to the laceration subsequently, and an operation was performed six weeks after delivery, two catgut sutures being used in the vagina, and two wire sutures being employed on the perineal surface.

Whether owing to imperfect asepticism of catgut sutures or some other cause, considerable irritation was set up by them subsequently. A shallow pocket was left just within the introitus, and a slight tendency to rectocele still exists in this case.

Case G.—Resided at a distance of seven or eight miles from town, and was attended during a season when roads were almost impassable, owing to drifts, in consequence of which the subsequent watchfulness, which is so necessary especially when the patient is under the care of an unskilled nurse, could not be exercised in her behalf. She had been afflicted for two or three days prior to accouchment, with a severe diarrhœa, making it impossible to preserve even an appearance of asepticism during delivery. Pains had been severe during the passage of the head through the brim and into the cavity of the pelvis. Head presented in the l. o. p. or fifth position. Uterine contractions were very strong, and after making several efforts at rotation by aid of right or posterior blade of long forceps over left parietal bone of child as a fulcrum, with first and second fingers of right hand pressing right aspect of forehead in the opposite direction. I concluded to administer chloroform and try rotation with the short forceps. I withdrew the blade which I had been using as a vectis, and had hardly given the patient half a dozen whiffs when a violent and prolonged pain occurred, accompanied by retching, and suddenly before I could resume my position at the bedside, the head was expelled. On examination I found a complete laceration (involving sphincter ani) extending upwards in the septum about $\frac{7}{8}$ of an inch. One or two hæmorrhoids were hanging in the rent while, the hæmorrhage and intestinal contents obscured all the parts involved.

I was unprepared for the emergency, and at all events the septic material, butting the wound would probably have prevented union.

After washing vagina and rectum out with a carbolated solution, I introduced two deep and two superficial sutures, tying them on the perineal surface. Nothing but a double cotton thread and ordinary sewing needle were available.

In company with a young surgeon, I visited the patient on the third day, and operated after the manner advised by Tait, turning one pair of flaps made by splitting into the rectum, the other into the vagina. Catgut sutures were used for the

rectal and vaginal co-aptation, silver wire for the perineal surface. I was careful to observe Emmet's procedure in reference to the posterior or circular suture, and here, I may add, that the corresponding cotton thread facilitated correct apposition, as I was thereby enabled to draw the tissues downwards and hold the surfaces exactly, while carrying the wire from left to right. I secured the wires by perforated shot and clamping. By way of digression affording an instance of one of the comical sides of our noble profession, I will mention that during the time that was occupied in operating, we were regaled by the "old man" swearing at "Andrew Jeremiah," the husband of the patient, whilst the son was with equal profanity objecting to the presence of the boyish surgeon in a room with his "Mary Jane"; insisting also on leaving his bed, where he was forced to lie owing to a fractured thigh, in order to see that "that kid of a doctor," should not see too much.

In this particular case I locked up the bowels by opium, ordering appropriate diet. On the day appointed for removing the sutures the roads were impassable, and in order to do something a neighbor insisted that the patient should take a dose of that "sarchin" remedy which they are all so fond of prescribing, namely, "castorile."

When I succeeded in visiting the patient I removed all the wires expecting to find a total failure, however, fortunately the posterior wires had procured a partial union. I believe that had I been able to secure a careful evacuation of the rectum by an enema, the result in this desperate case would have been a tolerable success.

The last case was in the person of a primipara who had formerly been under the care of our worthy President for uterine hæmorrhage.

In this lady the ostium vaginæ was preternaturally small and rigid, the ano-vaginal portion little more than three-quarters of an inch in extent.

Although presentation and position were normal, the acuteness of the pubic angle caused delay and called for great caution in delivery.

I exposed the parts to view, and as the application of the forceps had been rendered necessary by the exhaustion of the patient and increasing feebleness of expulsive efforts, I kept the patient's thighs as near as possible in a line with her body; directing the female assistant to press the gluteal and coccygeal regions inwards and downwards respectively towards the median line. I consider that by these means a severe laceration was averted, as the tear which took place slowly under my eyes, only required one silk and three wire sutures in order to restore their normal condition. On this occasion, not having any shot, I slipped a piece of rubber tubing over the twisted ends, leaving one longer than the rest to be bent back on the outside of the rubber.

The bowels were kept regular by enemata, pulv. glycyrrh. co. and the avoidance of bulky or constipating food. No trouble has been experienced by patient since operation or removal of sutures, which latter took place on the ninth day.

Remarks.—While it may be deemed presumption on my part to draw any conclusions from such a meagre number of cases, still if I may but succeed in eliciting some ideas and suggestions in this matter from this large, influential, intelligent, and representative body (as the stump speaker putteth it), which would prevent even that number of cases occurring in a practice of 20 years, my article will not have been barren of result. I shall close my paper, Mr. President and gentlemen, by referring briefly to some points relative to the cause, prevention, and treatment of this accident.

I do not propose to dilate on the importance of an unbroken pelvic floor, made up as it is of connective muscular, fibrous and vascular tissues; nor do I intend to enlarge on that "disputed territory," the perineal body, which has by some been credited with forming the whole and sole support of the uterus and its adnexa; but at the same time let me impress on my younger *confrères* the importance of preserving these intact, if possible; and, moreover, the vital necessity of bringing something more than mere perineal and vaginal surfaces of these lacerations into apposition.

Amongst the most important factors in the production of ruptured perineum at childbirth are: advanced age of primiparæ, acuteness of pubic angle, unusual height of pubic symphisis, occipito-posterior positions, great breadth or fœtal shoulders, incompressibility or fœtal head, undue haste in delivery, abuse of ergot, over-abduction of thighs with simultaneous flexion, dorsal positions of mother, prolonged pressure from faulty presentations or positions of fœtus, and on the other

hand, premature interference by accoucheur before the normal relaxation and stretching of maternal parts has been completed.

When an occipito-posterior position is recognized, endeavor as early as possible to convert it into first or second position. The posterior wall of the pelvic canal should be prolonged by having the nurse exercise downward and inward pressure over the sacral and gluteal region.

The patient should have rectum and bladder emptied when time and circumstances permit.

The cutaneous surface of the perineum, and even the vaginal wall and posterior commissure, should be freely anointed. I prefer salicylated lard or lanoline to vaseline in such cases. Patient's thighs should be only slightly flexed and abducted to only such a degree as to allow the physician's hand and arm between them.

Unless the vulvæ are seen to be distended by the shanks of the forceps *do not remove* them, but carefully restrain, by their aid, the expulsive efforts as the vertex is escaping.

I may say under this head that when I have reason to fear laceration, I invariably give chloroform, if uterine contractions are normally powerful and no contra-indications to the anæsthetic exist.

I prefer the sinistro-lateral posture as to the patient, who should in these cases have the parts exposed to the operator's eye, for I feel certain that by such precaution I have prevented an unavoidable laceration (and the large majority of lacerations are such) from becoming complete.

You will observe that I have varied the mode of operating, and that sutures used have not been confined to one particular class.

I think catgut preferable for vaginal and rectal surfaces, but very much prefer the silver for the perineal sutures. In primary operation, of necessity, "Hobson's choice" prevails. I have been very well satisfied with sterilized silk in such cases. There are instances in which the laceration is slight or superficial when the suture is already at hand in the form of the natural pubic capillary growth.

In primary operations, should wire be at hand, along with perforated shot, it is advisable to slip three or four upon the extremities of each suture, so that as swelling subsides those shot unclamped, namely, all but the external one may be crowded closer to the retracting edges of the wound, and the outside shot clamped again, while the one originally acting as a retentive can be cut off.

You will also notice that I have varied my practice as to the condition of bowels according to circumstances.

Where circumstances permit the use of the catheter at regular intervals it would be preferable, in my opinion, to the use of the self-retaining catheter. In my limited experience I can not say that I have ever seen any ill effect follow the contact of normal urine with the wound.

I must, in conclusion, say that the operation of flap-splitting is much easier performed than that of paring, as it is very difficult to remove the glazed surface from one border of the wound to the other entire; a proceeding which is very desirable.

Reports of Societies.

GYNÆCOLOGICAL AND OBSTETRICAL SOCIETY OF BALTIMORE.

MARCH MEETING.

The President, Dr. Henry M. Wilson, in the chair.

Dr. Howard A. Kelly read a paper upon "The Technique of the Cæsarean Section," described in a series of steps, from the selection of the case, down to the after-treatment. The relative and absolute indication were described. The Porro operation was rejected, excepting under special peculiar circumstances; for example, when there was good reason to suspect septic infection, as after prolonged efforts at delivery, at turning, or the use of the forceps, also in cases of large tumors occupying the body of the uterus, or in some cases of cancer, or in uncontrollable hæmorrhage from the placental site. Thus limited, the conservative operation and the Porro operation are mutually exclusive, not occupying the same field.

It is a serious surgical error to mutilate a woman by performing the Porro operation where special indications do not exist. The mortality of the Porro operation is fully as great and probably greater than that of the conservative.

In a healthy case, free from sepsis, with unruptured membranes, it is not necessary to deliver the uterus from the abdomen before incising it

and delivering the child. It is rarely necessary to use any contricting ligature around the cervical end of the uterus. Excessive hæmorrhage from the placental site or the margin of the wound can very well be temporarily controlled by constricting the cervix with the hands of an assistant.

The uterine suture consists of deep sutures, embracing the peritoneum and muscularis, but not the decidua. About ten such sutures are needed. Between each of these deep sutures, half deep sutures can be passed, securing perfect coaptation of the peritoneal surfaces. The sero-serus sutures are not necessary in cases free from any suspicion of infection. In such clean cases, the uterus is dropped back into the abdomen and covered with the omentum. If there exists a slight suspicion, it is of advantage to draw the omentum down behind the uterus, thus favoring the discharge of any septic material through the lower angle of the wound.

Drainage of the pelvic cavity cannot be efficiently carried out. The abdominal wound must be concealed by a dressing made of snowy cotton dissolved in alcohol and ether, containing one part bichloride to 16,000. A little strip of gauze is laid over the wound saturated with this solution. This adheres until it is time to take the sutures out, concealing the wound, and preventing contamination from the outside much better than many layers of gauze and cotton. The baby should be allowed to nurse as soon as the mother has thoroughly recovered from the anæsthetic.

The vagina should not be douched out as a matter of routine. The vaginal outlet should be secured from the introduction of sepsis from without by separating the labia and throwing into the valvular orifice a drachm of powdered iodoform and boric acid (1 to 7). A cotton pad loosely applied to the vulva should be changed as often as soiled by the discharges. The patient thus passes through a perfectly normal puerperium.

Dr. Chas. P. Noble.—In the technique of the operation laid down by Dr. Kelly, reference has been made to typical cases. In such cases I agree entirely with what he has said. But all cases are not typical. I will report an unique case upon which I did the Cæsarean section recently.

Dr. Kelly had operated in a previous pregnancy. As a result of the first operation there remained a fistula, opening from the uterine cavity through the abdominal wall. Notwithstanding this fistula she became pregnant, and for several weeks the amniotic bag protruded into the opening, so that there was nothing between the fœtus and the outer world but the thin amniotic sac.

This sac ruptured at the thirty-third week. The woman had a generally contracted pelvis; besides having a large mass of cicatrical tissue behind the cervix, left from her previous Cæsarean labor. Had spontaneous labor been possible, the fœtus would have escaped through the fistula and not per vaginam. In view of the conditions I thought Cæsarean section preferable to delivering the mutilated fœtus *per vias naturales*.

The finger was inserted into the uterus through the fistula, and with this as a guide the incision was made through the region of utero-abdominal fistula.

Sufficient room not being afforded for delivery the peritoneal cavity was opened and the uterine incision lengthened. The living fœtus was then delivered. The placenta and membranes were firmly adherent, and were slowly peeled off. To control bleeding during this time it was necessary to insert the uterus through the abdominal incision to enable the assistant to grasp the lower segment. The patient passed through a perfectly normal puerperium and is now quite well and soundly healed. The case is entirely unique in its conditions, and in the technique of the operation.

Three cases of Cæsarean section have been observed by me, all having made good recoveries. When the operation is done at the proper time, and after the method described by Dr. Kelly, I am sure this result will be quite uniform.

The essentials of success are:

1. Operation at the proper time, before labor, or at the beginning of labor
2. Rapidity in operating.
3. Accurate suturing.
4. Asepsis.

With reference to suturing, I believe that the Lembert suture as ordinarily described, is purely theoretical. The peritoneum will not hold a suture. Operators have unconsciously included the deeper tisues in the so-called Lembert sutures. An important point, not generally recognized in this country, is, that the diagnosis should be made in the last weeks of pregnancy, and under ordinary circumstances, the operation to be decided upon and done at the close of pregnancy, before labor sets in, or immediately thereafter. I would not do the modern Cæsarean section in a case which had been tampered with by efforts to deliver with the forceps or by version; but in such cases would prefer the operation. In Philadelphia, in the last four years, twelve Cæsarean sections have been done, and ten mothers have recovered. One that died had pneumonia at the time of the operation. The other case was one in which the surgeon at the same time removed a fibroid tumor.

Dr. B. B. Browne.—I think all the procedures

recommended are in the main correct, and are in accordance with the rules and suggestions laid down five or six years ago by Garrigures, Saenger and Leopold; these should be carried out in ideal cases, but unfortunately, we meet with many, complications which must be dealt with as they occur.

Having recently performed the operation myself, and looked up the literature and technique of the subject, I was surprised to find that we can to-day make but little improvement or change for the better.

In 1886, Saenger had operated four times, saving all the women and children. Dr. Leopold had operated nine times and lost one woman, saving all the children.

Dr. T. A. Ashby.—I wish to congratulate Dr. Kelly on his brilliant success with the Cæsarean section. This success is convincing proof of what can be done when the section is instituted under proper conditions, and at a proper time.

The future of the operation rests upon a proper and judicious selection of the case, and upon an immediate resort to the section before other methods of delivery has been attempted and abandoned. I doubt whether the Cæsarean section under such conditions, will give a higher mortality than the ovariotomy of ten or fifteen years ago.

The technique of the section is simple enough, and certainly its mechanical execution is not as difficult as that necessitated in the removal of many conditions of tubal and ovarian disease.

Hæmorrhage is not large, and it is easily controlled. Septic processes should not follow if strict aseptic precautions are observed.

The progress of the section as a substitute for other methods of delivery, rests upon an early and clear recognition of the pelvic measurements, and a prompt acceptance of the method as the proper procedure in the given case. When this is done the success of the section is not compromised by unfortunate interferences in other directions. When we have obtained the statistics of this class of cases, we are in a position to compare the mortality of the section with other operative methods.

Dr. W. P. Chunn.—I did not hear the first part of the history of the case, but think I would have removed the ovaries or tied the Fallopian tubes to prevent future conception. It is hard to say just what operation should be done.

Dr. Noble.—In doing a Cæsarean section, I would not touch the ovaries and tubes as Dr. Chunn speaks of doing, but would do nothing to prolong the operation. Tying the tubes would probably cause salpingitis. This objection is purely theoretical. So far as I know, this has been done only twice—once in England, and once in America.

Dr. Brinton.—I have been for some years interested in measuring the pelves of women. Very often we go to labor cases without knowing anything about the condition of the pelvis. With the hospital surgeon who has the best facilities, the Cæsarean operation will undoubtedly be the best in cases of extreme pelvic contraction. But with the average practitioner, what is best? I think that with these physicians craniotomy will hold the place. In speaking of craniotomy "holding its place," I referred to those cases of pelvic contraction where the child could be extracted without harm to the mother, say from $1\frac{3}{4}$ to 3 inches.

Dr. T. A. Ashby.—I must offer an apology for presenting a series of experiences which are familiar to all who have done much intra-abdominal work. I have brought these charred remnants of tubal and ovarian inflammation before the Society to invite discussion, not to exhibit anything original. They represent nearly every phase of intra-pelvic inflammation and illustrate the various degenerative conditions which are found in the pelvis after an inflammatory fire has passed over these tissues. Of the nine specimens here presented, removed from the same number of cases, no two are alike.

In one case the tube has received the brunt of the attack, in another the ovary is involved in abscess cavities, whilst in a third both tube and ovary are tied up in a knot by adhesive inflammation, and so on through the series.

The clinical histories of these cases would be exceedingly interesting did time admit of a recital, but I shall not tax your patience with details. We have the same old story in all of these cases save two—one the large specimen of a tubal sac of uncertain origin, probably an interrupted tubal pregnancy of long standing, and the other the remnants of a catarrhal salpingitis and ovaritis with intra-pelvic adhesions. Of the other seven specimens the origin of the condition is of chief interest in this connection, since they explain to my mind the essential factor in the production of the specimen here presented. Each of these women have borne one or more children; in each case the history of the intra-pelvic trouble dates from the last lying-in period, which was accompanied with mild or severe symptoms of child-bed fever. In each of these women there was an old lacerated cervix, in some more pronounced than in others. The histories of these cases, as far as they can be made out, and can be interpreted, tell the simple story. During labor a cervical tear occurred, in this wound septic material gained a lodgement, a septic process was established, which extended from the cervix to the cavity, from the cavity to the tubes, and from the tubes to the intra-pelvic peritoneum.

The severity of the symptoms in each case must have borne some relation to the septic process and to the tissues involved, though no way is offered for verifying this statement. We simply find the results in general destruction of the tube, or ovary,

or of both, and the inference is that drainage was secured and pus escaped, leaving no remnants of this character behind, except in two of the specimens, in which I found pus cavities in the ovary containing each a drachm or more of pus.

These cases illustrate the fearful havoc which a septic process following parturition may occasion among the pelvic organs. A little fire kindleth a mighty conflagration, is literally true in more respects than one. In an experience with other cases I have observed the septic process in its very beginning when limited to the cervix and cavity, and I have seen the lying-in woman's temperature fall from 103° to normal within twelve hours after thorough cleansing and disinfection of the cervix and cavity in these cases, and a complete arrest of the process before the tubes were involved. In another case I have seen tubal and general pelvic-peritonitis in active force following immediately the infection in the cervix and cavity. This experience convinces me, despite all other theoretical teachings, that we have in the lying-in state an explanation of those intra-pelvic diseases which render the lives of so many women useless and oftentimes utterly miserable. Now is it necessary that the lying-in period should be surrounded with extra hazard, high temperature, and severe pain? A septic endomitritis following parturition may run a very mild and low grade course, and still result in sub involution, salpingitis, pelvic adhesions, and other intro-pelvic conditions which impair the normal function of these organs.

The lesson clearly taught by such experience is that aseptic conditions should be enforced in every case of labor, that the least suspicion of sepsis should lead to immediate investigation of the uterine cervix and cavity with a view to thorough cleansing and arrest of the septic process. If this be done, as I have done it in a number of cases, even with medical friends in consultation, we can cut short a sepsis and arrest a condition which will surely extend to the tubes and pelvic peritoneum in the absence of prompt attention.

Dr. B. B. Browne.—The fact that laceration of the cervix is so frequently found in married women suffering from tubal disease is, I think, because because the purilent discharge from the uterus passing over the torn surfaces prevents their union, while the septic material also extends to the tubes; when there is no septic material in the uterus the lacerated surfaces readily unite, and the tubes are not affected.

Dr. J. W. Williams.—The specimens exhibited represent a class of cases, that are very common, and which will become more so as we become more expert in bimanual examination Indeed to a skilful palpator, it almost seems that the majority of women examined have more or less tubal or ovarian diseases. The specimens are particularly interesting to me because I have studied carefully the pathology of a large number of similar cases. The etiology in many cases is doubtful, but most observers appear to cling to Noegerrath's theory of latent gonorrhœa. Examination of the pus in cases of pyosalpingx brings forward most interesting facts. For in most cases it is impossible to discover any species of bacteria either under the microscope or by culture methods, which shows that the bacteria which caused the trouble have long since died, for closed pus cavities are not particularly favorable for the growth of organisms. In two cases we found undoubted gonococci, and in a case following an imperfect abortion, the streptococcus and in another case the staphylococcus aureus.

Clinically, the cases due to the pus organisms are much more acute and virulent than those due to the gonococcus. These results correspond with those of Zweifel of Leipzig, who has just published his observations. He also found the gono- and streptococcus, but not the staphylococcus. In one of his streptococcus cases, the subject was an undoubted virgin, and he accounted for the infection by an abscess following an attack of typhoid fever some years before.

Dr. Ashby speaks of the relation of lacerated cervix to salpingitis, etc. I cannot consider it a factor in the production of the disease, and regard it merely as a coincidence. If it were a potent factor in producing the trouble, we should find salpingitis and pelvic adhesions far more frequently than we do now; for we must remember that in most women there is more or less laceration of the cervix during labor.

Moreover, this cause is certainly inapplicable to the frequent cases occuring in nulliparous women, and especially in virgins.

A close study of the clinical history of a number of cases inclines me to believe that the majority of cases follow infection during labor or after an incomplete abortion; for in many cases it is impossible to obtain even a history of leucorrhœa before the labor, which would apparently exclude gonorrhœal infection.

By infection during childbirth, I do not necessarily mean the cases in which we have well-marked puerperal fever, but the milder degrees of infection as well; for most of the cases of so-called milk fever are due to infection, and may give rise to serious results.

Zweifel, on the contrary, who has just published a remarkable series of 79 salpingo-oöphorectomies, with only one death, believes in the gonorrhœal origin of most cases. Saenger traces most of the cases in virgins back to a gonorrhœal salpingitis during childhood, which has persisted and ultimately affected the Fallopian tubes. While I do not feel justified in subscribing to this view, I can say that it is quite probable, for lately I have seen a number of cases of undoubted gonorrhœa in little

girls, of from two to seven years of age, in which there was no suspicion of criminal action.

In eight cases of vaginitis in little girls which I have examined, I found gonococci in six of them. In several, the mode of infection was quite clear. In one case the husband acknowledged an attack of gonorrhœa with which he infected his wife during pregnancy, and each of the children born after it had opthalmia neonatorum, followed, when they were older, by gonorrhœal vaginitis. In another case an older brother had gonorrhœa, and his two little sisters used his towels for bathing.

These remarks will show that the vaginitis of little children is not of strumous origin, as generally supposed, and that it demands a more active treatment than is generally employed; especially when we consider its possible consequences.

Dr. Brinton.—I can corroborate the views of Dr. Williams in regard to the specific origin of the cases of vaginitis in children, having recently treated first, the father with gonorrhœa, later, the mother, and within a fortnight from the time the father consulted me, was called to see the little daughter, aged four, with a severe "vaginitis," which yielded to the usual treatment in about the usual time. My experience has been that if a child is found with a "vaginitis," close investigation will prove that some older member of the family has either a "urethral" or "vaginal" discharge.

Dr. Noble.—Dr. Ashby has brought up so many points, that it is difficult to know just what to take up.

It is now the fashion to call all unilateral collections of blood extra-uterine pregnancies. But I have recently had a case that proved not to be a pregnancy. With reference to the uterine hæmorrhage coming from the tubes, we do know as a fact that it is possible for blood to come from the tubes. This was common to all in the days when the stump was treated by the extra-peritoneal method in doing ovariotomy. I am quite sure that gonorrhœa has been the cause of most of the cases of pyosalpinx that I have seen, and I think that the cause of salpingitis in young women is often some simple infection. Many cases of dysmenorrhœa in young women are due to salpingitis. In such cases it is unnecessary to question their chastity. I agree with all the speakers in reference to the relation of lacerated cervix to salpingitis. Where there is a laceration there is frequently an endometritis, and there is no reason to think that it may not follow out into the tube. I believe firmly in the great value of drainage tube; and use it in almost every case. When properly cared for it is practically free from objection, while being of most positive advantage in allowing the escape of serum and blood.

Dr. H. P. C. Wilson.—I did an exploratory laparotomy for a fibro-cystic tumor. In manipulation I found great tendency to bleeding, and as I could not get at the ovaries nor remove the tumor without causing death, I closed the abdomen. She got on well for 14 hours when she became very feeble, heart and respiration very weak. She was put upon digitalis and muriate of quinine; but it did no good. The heart became so weak that the pulse could not be felt; then began with five minims of tincture of strophanthus every three hours, and ether ♏ xx. hypodermically every three hours; the pulse became stronger, 125 to the minute and she felt better. The next day she became unconscious, pupils dilated, face flushed, pulse 120, temperature normal. The medicine was withdrawn, but she remained in this condition about 24 hours. To-day she is better, consciousness returning, pupils contracting. I have had no experience with the poisonous effects of strophanthus.

Correspondence.

MEDICAL EDUCATION IN ONTARIO.

[The official communication of Trinity Medical College recently sent in to the Government refers to a subject of great interest to the profession generally. There is a very important principle involved in this document and one with which the educational interests of medicine, and to no small extent those of Arts as well, in Ontario are very closely associated.—ED.]

HOLYROOD VILLA, 52 Maitland St.
May. 13th, 1891.

TO THE HON. O. MOWAT, L.L.D.,
Attorney-General Ontario, Etc.

DEAR SIR,—My attention has been drawn to the subjoined resolution of the Senate of the University of Toronto, which appeared in the *Globe* of the 11th inst., and in the other newspapers. "On motion of Dr. Caven, seconded by Sir Daniel Wilson, a deputation was appointed, consisting of the Chancellor, Vice-Chancellor, President, Drs. Shearaton, Burwash, Mr. Moss, Father Teefy, Dr. O'Sullivan, Prof. Loudon, Dr. W. T. Aikins, Dr. Wright and the mover, to urge upon the Government the propriety of constituting Anatomy, Pathology, and Sanitary Science, a part of the work of the University, and to assist the University in providing the requisite means."

Trinity Medical College, over which I have the honor to preside, is an Independent Chartered

Medical College, in affiliation with the University of Toronto, and with other Universities, and on behalf of our College, I most respectfully, but in the strongest possible manner, protest against action being taken by the Government, in the direction indicated by the above resolution. Before any such action could be *fairly taken*, that is, taken with due consideration for the interests, not only of Trinity Medical College, but of all the other Independent Medical Colleges in the province, It is submitted, that the Legislature should be called upon to decide, whether Medical Education in Ontario, in whole or in part, *is* or *is not*, to be carried on *hereafter*, at the *public expense*. If it be decided by that body, that the supply of good medical men now being educated in our various colleges, and *whose attainments are afterwards thoroughly tested by excellent examinations of the Medical Council*, is inadequate to meet the requirements of our people, and that *public* aid is called for, in order to increase the supply, I beg to submit, that this aid should not be given to any *one* Medical Faculty, out of the *six* actively engaged in medical education, but that it should be distributed to ALL in absolutely fair proportions, regulated by the attendance of the students at the respective colleges. If on the other hand, the supply of well educated medical men so long furnished entirely *free of cost* to the public, is found to be quite sufficient, I ask, that the course hitherto pursued be still continued, and that, not only *no other chairs in any* ONE *medical college* be subsidized directly or indirectly, but that all *existing subsidies* which are felt to be as unjust as they are indefensible, in any single Medical Faculty, be entirely done away with, so as in accordance with British practice, and with our own, for many years, we may have every Medical College in the Province, occupy precisely the same position in reference to public aid of any sort or kind. Apart from the manifest injustice, which acceding to the request contained in the foregoing resolution would inflict upon all our *other* Medical Colleges, it is submitted, that the using of University Public Funds for any other purpose than the promotion of *general*, as opposed to *professional* education would, just to the extent of the amount so mis-used, cripple the University in Arts, where she should be strongest, and where all the money she can get, is imperatively required.

I have the honor to be,

Yours most respectfully,

WALTER B. GEIKIE,

Dean Trinity Medical College.

Selected Articles.

NEURASTHENIA.

The *Post-Graduate* for January, 1891, contains Dr. Charles L. Dana's recent paper on neurasthenia, which is defined as a morbid condition of the nervous system, presenting excessive irritability and weakness as underlying characteristics. The modifying elements are age, sex, and the neuropathic constitution. Neurasthenics suffer from a peculiar feeling of nervousness, discomfort, unrest, or a sense of tension. Interest in work is lost, there is dread of responsibility, and various morbid fears. Some idea fixes itself upon the mind, and the patient cannot rid himself of it. Sleep is poor, and the neurasthenic awakes unrefreshed. There is difficulty in fixing the mind upon work. About half the cases suffer from headache—diffuse, frontal or occipital. There is always some weakness and irritability of eyesight. The visual field is normal, but sensation in its periphery tires easily, so that after long testing there is apparently a concentric limitation of the field. The color sense is unaffected. Muscular insufficiencies often occur. Visual memories are lessened. Faces and places are not well remembered. Neurasthenics bear visual irritation badly. Hypermetropia or astigmatism may keep up neurasthenia, but will not in themselves cause it. Attention to the eyes alone, as a means of cure, is irrational and disappointing.

Noise creates great distress. This is usually due to the general mental irritability. Sometimes there is distinct hyperacousia, and slight noises or agreeable music drive the patient nearly wild. Alterations in taste occur with digestive complications. There is a general over-sensitiveness to odors. General muscular strength is lessened, the patient tiring, or even collapsing, after slight exertion. There may be fine tremor of the hands after muscular or mental effort. Palpitation of the heart occurs easily. The pulse has frequent and rapid variations in tension. In both sexes there are genital irregularities. The digestive organs, including the metabolic tissues of the liver, are almost always at fault. Gastric symptoms of neurasthenia are those resulting from the action of ordinary or somewhat impaired digestive processes upon over-irritable gastric nerves, or upon a generally over-irritable and weak nervous system. A neurasthenic liver is one of the most common and fundamental conditions of the neurasthenic state. This produces intestinal dyspepsia, fermentation and constipation. The blood absorbs an excess of ptomaïnes and imperfectly oxidixed products. Hence paræsthesia, somnolence, and head pressure. The urine in the young neuropathic cases is variable in specific gravity, generally low. Phosphates, earthy

and alkiline, are excreted in excess. Nitrogeneous solids are often inadequate in amount. Oxalates are found in older cases, but indicate no more than does excess of urates—*i.e.*, a lithæmic state. The amount of urine passed is variable. Sometimes there is polyuria, but, on the whole, the total amount is variable. Respirations are normal in number, but shallow, and deficient respiratory expansion may be noted. Younger patients and women are generally anæmic, but middle-aged adults are not, the face being full and ruddy, and the mucous membrane of good color.

When neurasthenia begins before the age of twenty-five, there is more distinct evidence of neuropathic constitution and inheritance. Mental symptoms are more marked, approaching those of hypochondriasis, and there is greater depression and greater introspection. Neurasthenia of the climacteric, in both men and women, is of comparatively short duration and favorable in its course. Neurasthenia in women shows itself by a greater dominance of sensory and irritative symptoms. There is more pain, headache, neuralgia, and spinal ache, and a greater subjective sensation of "nervousness," more restlessness and irritability. There is greater variability in the rise and fall of symptoms. The neurasthenic women under excitement does all that a healthy woman can, then collapses entirely. Women of strong purpose will be thus alternately sick and helpless, or bright, active, and cheerful. Those of weak will, aided by the mistaken ministrations of sympathetic friends, get in bed and stay there, drifting into permanent invalidism, because overcome by the pain and weariness that active movement excites. Hysteria often complicates these cases. "Crises" of palpitation occur, of vomiting, tympanites, diarrhœa, pulmonary oppression, syncope, and emotional excitement. Nutrition suffers more than in men, the disorder is of a severer form, and the patient emaciates. Symptoms are slightly exaggerated at the time of menstruation. Rarely, if ever, beginning before eighteen or after fifty, neurasthenia occurs in the following order as regards age: First, between eighteen and thirty; then between thirty and forty; and less frequently between forty and fifty. Exciting causes are excessive mental strain, sudden shocks, injuries, frights, sunstroke, excessive child-bearing, domestic troubles, sexual excesses, especially masturbation, irregularities and excess in eating, drinking, and smoking. Overwork does not cause it, provided there is no great mental worry. Even these can be borne if the patient is regular in eating and sleeping, and does not drink or smoke too much. Reckless indulgence in athletics during youth, particularly if combined with the over-use of tobacco, may be a cause. In some cases it follows apparently some single powerful physical exertion. Malarial poisoning, syphilis, the infective fevers, particularly cerebro-spinal meningitis, are important agents in causing neurasthenia. Of reflex influences that cause and keep it up, disturbances of the stomach, intestines, and liver are by all odds the most important; next come irritations from the pelvic and generative organs.

Neurasthenia is a condition in which the nutrition of the nerve-cells is primarily at fault. These cells have lost their power of building themselves up into stabler compounds. They break down under slight irritation, and consequently send out but feeble impulses. It is thought by some that this dystrophic condition especially involves those parts which make up the vaso-motor neuro-mechanism. If this be so, it is the nervous tissue of the medulla and central parts of the spinal grey matter that are most involved, There is little doubt, however, that the cortical grey matter and higher centres of the brain are also implicated, for mental symptoms are always prominent. Peripheral nerves are not primarily at fault. Cerebral and spinal hyperæmiæ are secondary to nervous disturbance. Neurasthenia is primarily cellular and secondarily vascular.

The duration of the disease is from one to ten years, depending largely upon treatment and habits of life Most patients get well, or practically well, with some reminders that they cannot overtax themselves or do the work of those of strong nerves. The late years are the best, owing to lessened nervous sensibility and early, orderly, and temperate living. Neurasthenics, if they get well, get old. With care, neurasthenia may readily be differentiated from simple nervousness, degenerative forms of insanity, such as *folie du aoute*, from hypochondriasis, from melancholia, hysteria, and spinal irritation. The patient should have his course of treatment laid out for him. Rest, or lessening of business or domestic duties is fundamental. While travelling is bad, a sojourn at such places as the Azores, West Indies, Bermuda, or some special point in Southern Europe where outdoor life is possible, is of benefit. Diet should be rather nitrogeneous than otherwise. Fats, green vegetables and fruits may be added. Sugars and starches are to be avoided, though malt preparations usually agree. Nutrition must be carefully watched, the patient must be weighed and sometimes fattened, using water, malt, oil and cream for this purpose. In many cases a low diet, but one perfectly digestible, is indicated. Cold sponge-baths, the shower, a strong jet of cold water on the back, a cold plunge, or the wet pack, are measures almost invariably indicated. Lukewarm baths, 95° F. to 98° F., for half an hour at night, relieve the paræthesiæ and insomnia. The skin should have a thorough rubbing every day. Interesting respiratory exercises that expand the lungs should be encouraged. Drugs that are most useful are the bromides, nux vomica, mineral acids, quin-

ine, valerian, the hypnotics, and saline and alkaline laxatives. Bromide of sodium or potassium should be given in doses of fifteen or twenty grains, three times daily, for only a week, and then gradually reduced to one-half dose, once daily; quinine should be given carefully, as it may increase the nervousness. In neurasthenic women with painful backs or hysterical complications, too much cannot be said for electricity, which should be given three or four times weekly, and then suspended. General and spinal galvanization and the static sparks are the especially efficient forms.—*Med. Rec.*

ALBUMINURIA.

The question of the significance of albuminuria must still be regarded as, to a certain extent, *sub judice*. Professor Senator, in the second edition of his work upon albuminuria, has recently reiterated his views that albumen in the urine is, in a certain considerable proportion of cases, physiological in character; while in France the opposite view has been vigorously maintained by Dr. Lecorché and Dr. Telamon. This is one of the cases in which it is particularly desirable to use terms regarding which there can be no ambiguity. If we speak of albuminuria as being "physiological," we should naturally be presumed to mean that the presence of albumen in the urine is a normal occurrence. But we do not apprehend that this is asserted by any competent authority. The most that has been urged on this side of the controversy is that in a considerable proportion of persons, varying from 20 to 25 per 100, apparently in perfect health, albumen may be found in the urine, if sufficiently exact tests be applied. We fail to see how a phenomenon only to be found at the most liberal estimate in one person out of four or five can be correctly designated as "physiological." On the other hand, if we employ the term "functional albuminuria," we merely imply that albumen may be present in the urine without such organic changes in the kidney as can be detected, and this position is now, we conceive, almost universally admiited. The real point at issue—and the controversy, so far from being a verbal one, is really of the most vital pathological interest and importance—is whether the renal epithelium, when structurally sound and functionally efficient, ever allows the transmission of albumen. Two examples will render the real point at issue more readily apprehensible. It is admitted that minute quantities of sugar can be found in the urine without pathological significance. The question is whether "functional" albuminuria is to be placed in the same category as this, or whether it is rather analogous to those changes in the gastric secretions which accompany some forms of dyspepsia, but which pass off without structural change in the stomach or obvious impairment of health.

Senator believes that the aqueous constituents of the urine are the result of filtration and not of secretion. He attributes to the endothelial cells of the glomeruli a physical rather than a physiological function, and compares their action to that of the endothelium of serous membranes, which, under the influence of the blood pressure, permit the transudation of serum containing a certain proportion of albumen. To this contention Lecorché and Telamon reply that if the urine is a simple transudation we should expect to find it, like the serous effusions, uniformly and obviously albuminous. They share the view of Heidenhain that the glomerular epithelium exercises a selective action and opposes the transudation of albumen. If this be admitted to be its function, it would obviously follow that albuminuria can never be a normal phenomenon. Senator recurs to the analogy of sugar in the urine, and argues that, just as more exact methods of examination have shown the presence of sugar where it was not previously suspected, and in persons in good health, so the same methods show the presence of albumen under similar circumstances; and that, if we regard all albuminuric patients as potential subjects of Bright's disease, so ought we to regard all glycosuric patients as potential diabetics. Argument from analogy is usually hazardous, and rarely convinces an opponent. In order that Senator's position should be maintained it would be necessary to show that the amount of albumen in the urine bears some proportion to the amount of albumen in the blood, just as the amount of sugar in the urine undoubtedly bears some proportion to the amount of sugar in the blood. But this position does not seem to be maintained by anyone, and is, indeed, obviously untenable. It would, further, be necessary to show that it is possible to have abundant albuminuria without structural change in the kidneys, since there is no question that abundant glycosuria may coexist with integrity of those organs; but this is unproved and extremely improbable. On the whole, we are disposed to doubt whether any useful analogies can be drawn between albuminuria and glycosuria. The pathology of the latter affection is extremely obscure, but it is certain that the kidneys are not the organs primarily at fault.

Senator attaches great weight to the admitted fact that a considerable proportion of persons have albumen in the urine without any other sign of impaired health. But to infer from this that the albuminuria is "physiological" is to go beyond the facts. The patient may suffer from excessive secretion from the nostrils, or from too free perspirations, or from slight habitual looseness of the bowels, without obvious impairment of health, but we should not, therefore, be justified in designat-

ing such symptoms as "physiological." We should rather say that there was some departure from health, but too slight to derange the general equipoise of the functions.

It is significant that these cases of transient albuminuria are most frequent in persons who are undergoing some severe and unusual strain, whether mental or physical. They are common among young men preparing for examinations and common among soldiers during the period of military service. The most obvious inference from such considerations would be that the albuminuria is a sign that the system is being overtaxed; that it is, in fact, as Professor Gairdner has happily designated it, a "danger signal." Another significant fact is the increasing frequency of albuminuria with advancing years, and with this fact must be correlated the other significant fact that in necropsies upon elderly persons organic changes in the kidneys are the rule rather than the exception.

Senator lays down some points which he regards as characteristic of "physiological albuminuria. 1. The absence of any other morbid sign. 2. The small quantity of the albumen. He fixes 0.4 or 0.5 per 1000 parts as the maximum. 3. The normal composition of the urine regarding its other elements, and especially the absence of casts, and formed elements. 4. The short duration and transitory character of the albuminuria. The difficulty is to see how it is possible to affirm that these characteristics might not be found in cases of slight but genuinely pathological albuminuria. The quantity of the albumen is certainly of itself a sign of no value whatever. Nothing is more common than to find the albumen decrease in amount in cases of Bright's disease until the merest trace is visible. Nor can casts decide the question for us. We may fail to find them in cases of Bright's disease; while, on the other hand, they are probably sometimes present in otherwise healthy urine.

This whole discussion, however inconclusive for the present, has undoubtedly served a good purpose in emphasizing the fact that albuminuria is in certain cases a trivial and transient affection, and that our prognosis must not be too grave until we have had time to take fully the bearings of a case and to form a sound opinion as to its probable course. It would, however, be a much greater and more disastrous error to imagine that albuminuria is ever to be regarded without apprehension, and without a clear realization of its ultimate dangers. —*Lancet.*

FROTHY SALIVA AS A SYMPTOM OF NERVOUS DYSPEPSIA.

The patients are generally about middle age, or rather under, and belong to the educated classes. These patients generally come complaining of having been "out of sorts" for some length of time, and not unfrequently date their illness back to some mental shock, trouble, or special worry. They complain of pain in the epigastrium, worse after food, constipation alternates with diarrhœa, and flatulence is a common symptom; in short, they are dyspeptics. They have headaches, eyeaches, toothaches—all sorts of aches.

The tongue is generally clean, or has only a little thin fur on the dorsum; in the middle and on the sides of the dorsum are two little collections of what, at first sight, may look something like fur, but on closer examination, it is found to be frothy saliva, composed of minute little bubbles, all of the same size, sticking closely together, and showing very little fluidity. Other patches of frothy saliva will be seen about the mouth, and in some cases I have noticed a similar condition of frothy secretion on the back of the pharynx, high up, and above the level to which the saliva can be conveyed. In some cases, the froth is more abunddant, and noticed by the patient; but generally the condition of the mouth is not noticed or complained of, although the throat is often referred to as being dry and painful, and the upper part of the pharynx is then in a dry and glazy condition, or slightly granular. In all cases I consider frothy saliva as pathognomonic of nervous disturbance, and of special importance as indicating the only line of treatment likely to be successful with this class of dyspeptics.

The history of the treatment of such cases is unsatisfactory, and may be somewhat as follows: The patient first goes to a dentist for toothache; the teeth are thoroughly set in order, but the ache very likely continues, or is shifted to some other part of the head. A physician is then consulted, who, finding eyeaches and throataches as well as the dyspepsia, advises consultation with specialists in those branches, but most likely without any return to comfortable health being obtained; a treatment directed to correct the indigestion, whether by diet or drugs, also generally fails. It is in fact rather a sad lesson, to look back on the notes of one of these cases, and to count up the various forms of treatment that have been applied with such poor success. This class of case is one in which the treatment of symptoms notably fails; yet it is the more excusable, since there appears to be nothing except symptoms to treat, no trace of organic disease being discoverable. Neither can the patients be described as hypochondriacal or hysterical. They are active, intelligent, hard-working people, and their symptoms are very real.

Now the reason of failure of treatment is, I believe, failure to appreciate the true cause of the dyspepsia, which is a nervous disturbance, produced by the trouble or worry, and giving rise to perverted secretion and nervous irritability. It is only by treating the central cause that we run any chance of relieving the symptoms.

It is, I think, peculiarly interesting to observe how a functional disorder may produce organic disease. Thus, the alteration of secretion and consequent drying of the pharynx is in the first place a purely functional disturbance; but long-continued drying of the pharynx produces changes in its membrane of a permanent kind, which even the restoration of function does not remove. Changes of a similar kind to those which we observe in the pharynx probably take place in the stomach.

Three principal elements of treatment I wish to enforce:—Bromides, Warmth, and Rest. I have mentioned rest last, not because I consider it the least important, but because, although easy to prescribe, it is difficult of attainment. The sorrow, the worry, the annoyance, are beyond our power of removal, and equally uncontrollable by the patient, at least in his present condition. He requires mental rest and physical ease, which are best obtained by change of occupation, not by mental and physical inactivity.

Much the same applies to diet. It should be non-stimulating, and the quantity of tea should be curtailed.

The patient should be warmly clad from head to foot.

Some bromide in gr. xv to xx doses in a carminative mixture is the best medium in these cases. They do not stand a tonic treatment with strychina, arsenic, or iron.

The gas forming the bubles is apparently secreted with the saliva and not intermixed with friction or agitation.—Dr. Batten, in *Med. Press.*

DIPHTHERIA: WITH SPECIAL REFERENCE TO ITS TREATMENT WITH HYDROGEN-PEROXIDE.

Dr. Dickey (*Annals of Gynæcology and Pædiatry*, Dec., 1890,) says: I know of nothing in the whole materia medica that will dissolve the diphtheritic membrane so quickly and thoroughly, and yet leave the healthy mucous membrane intact. When applied to pus or diseased tissue oxygen is set free, which appears in the shape of gas bubbles, and a frothy effervescing mass is to be seen; this is kept up for two or three minutes I am in the habit of diluting it 25 per cent. (although it can be used full strength) and applying it with an atomizer. This can be repeated until effervescence ceases, when the membrane will be found to have practically disappeared, leaving a whitish surface. When the membrane reappears it is again made use of. If the nose is invaded, it can be applied there with equal satisfaction. I am in the habit of having all the watery secretions from the nostrils absorbed with blotting paper rolled into conical shape and gently inserted into the nose, or by absorbent cotton wrapped on the end of a small stick, either of which is burned as soon as used. The peroxide is then applied. The keeping of the nostrils as free from secretions and membranes as possible is a matter of the utmost importance, and one too frequently over looked. The poison is more rapidly absorbed from here than from any portion of the mucous tract, being very liberally supplied with lymphatics. In children old enough to use a gargle, I have them use chloral hydrate in glycerine and water soon after using the hydrogen peroxide. This serves a threefold purpose; it is an antiseptic, a local sedative and an anti-spasmodic. In children not old enough to use a gargle it may be applied with the De Vilbiss atomizer. At the same time bichloride of murcury, tincture of the chloride of iron, with or without chlorate of potassium, or such other remedies as may suit the judgment of the individual prescriber, or be applicable to the case in hand, may be used. For my own part, I prefer the bichloride. Coupled with this should be given good, digestible food at regular intervals, of which milk should form the basis, and such stimulants, from time to time, as the individual case may demand. The constitutional treatment is not less important than the local, for such a virulent poison as we have to deal with in this disease saps the vital forces with wonderful rapidity. Consequently this must be attended to from the outset. When the temperature exceeds 103½° F., I have the entire body sponged with tepid water as often as may be necessary to bring it below this point. Pellets of ice internally will allay thirst and relieve very materially the turgid condition of the blood vessels, and should not be omitted. Ice may also be applied to the throat in a rubber bag or a bladder, relieving greatly the inflamed glands. This, briefly outlined, is the treatment in the more malignant forms of diphtheria which has given me the best results, and I attribute them to the use of the peroxide of hydrogen. It is true the other remedies used are excellent auxiliaries, but without the one I am confident the others would have proved insufficient. In milder cases, where the false membrane is not great and the toxæmia of a mild character, a gargle or spray of lime water reinforced with bicarbonate of soda, which increases its alkalinity, makes a very efficacious remedy.

As the secretions of the throat in diphtheria are acid, the addition of the bicarbonate adds greatly to its efficacy as a topical application. This, with the internal administration of suitable doses of chlorate of potassium (remembering that the chlorate in large doses has a very deleterious effect on the kidneys) in dilute hydrochloric acid, will be good treatment. It will be seen that I have avoided all reference to the use of swabs and brushes for the removal of

the false membrane. I think they, and all strong caustics of whatever kind or character should be religiously avoided. They are painful, and be as careful as one may, the surrounding healthy tissue is denuded of its epithelium, thus inviting a further spread of the disease. Much force has to be used in order to make the application, which of itself is a source of danger, as children have been known to suddenly expire in the arms of the nurse while resisting these applications. Only a few days ago a father told me, while his suffused eyes expressed the sorrow he felt, that his little son had died in his arms while being forcibly held to make an application to his throat with a swab. Eucalyptol and turpentine have been used as antiseptics and as solvents of the false membrane, and doubtless possess some virtues. With the latter the blood can be made more nearly aseptic than with any other drug that can be taken internally, but it has to be given in very large doses. Other remedies of greater or less potency have been recommended. Some are good, others indifferent, while some are positively bad. Take it all in all, I think in the peroxide of hydrogen we have a remedy of the greatest value in combating this dangerous malady. None will destroy the false membrane and bacilli more speedily and with greater certainty.—*Southern California Pract.*

MEDICAL EDUCATION.

At the recent Special Convocation of the University of Toronto for the purpose of conferring medical degrees, it was strongly urged by the Dean of the Medical Faculty that, since the people receive much benefit from medicine, they might justly be taxed to support a professorship of Sanitary Science and to establish a School of Pathology. In harmony with that view, and possibly as the outcome of the suggestion, the Senate of the University of Toronto has appointed an influential deputation to urge upon the Government to constitute Anatomy, Pathology and Sanitary Science a part of the work of the University, and to assist in providing the requisite means. As this proposal involves some very serious questions, it is well that it should be carefully considered both by the Government and by the people before it is allowed to prevail. We refer, of course, solely to that feature of it which involves the taxation of the people, or what amounts to the same thing, the diversion of a portion of the funds of the Provincial University for the purpose. The more wealthy private citizens can be induced to devote some portion of their means for the furtherance of such objects the better. But even were the proposal not complicated by the existence of voluntary and self-sustaining colleges, chartered by the Government, it would be one of doubtful justice and propriety. As we have before had occasion to say, we have not yet seen any good reason to doubt the soundness of the familiar principle of political economy, that the State is not justified in using public funds to produce an article which experience proves that private enterprise is abundantly able to supply. A profession is, as has been well said, the capital of the man who practices it. It is the source of his income, like the stocks or lands of the capitalist, the ships of the merchant, or the goods of the tradesman. The State cannot furnish the capital to all classes. Why select one or two special professions to be thus favored? Are we told to look at the achievements of Medical Science—at what this and that great surgeon or physician has done for humanity? But in order to make the argument available it must be shown that it was the aid rendered by a State-aided Medical School, rather than their own superior talents and devotion to their profession, that enabled these famous men to accomplish so much. Otherwise the argument goes to prove that the State should stimulate genius by rewarding the individuals who have achieved such results, rather than use the public funds for making doctors of others, a large percentage of whom will never become very useful or very famous. If again, the country were suffering from a dearth of skilled physicians, or if self-interest and professional enthusiasm were failing to provide an adequate number of well-equipped Medical Colleges, there might be some ground for advocating the endowment of one at the public cost, and for increasing that endowment as now proposed. But when we have already, besides the Government Institution, five independent Medical Colleges in Ontario, all chartered by the Government, and all claiming to teach efficiently the subjects above named, without aid from the public funds, it is not easy to see how the Government could, with any regard either to the public interests or to fair play between the colleges, make the sixth its special beneficiary in the manner proposed, thus giving it a still further advantage over its competitors chartered by the same Government, and sending their students before the same Examining Board. The proposal bristles with objectionable features, but looking to the very highest practical consideration, that of the progress of medical science, we believe it would not be hard to show that, as a rule, independent self-reliance, healthful competition and professional enthusiasm are much more potent factors in all successful scientific work than any pecuniary favors bestowed by the State.—*The Week.*

It is said that the highest marriage rate for females is found among trained nurses. This agrees with our own experience.

ON THE TREATMENT OF CHRONIC ENDOMETRITIS BY THE INTRA-UTERINE APPLICATION OF BORIC ACID.

Having obtained the most decided benefit in the treatment of cases of vaginal leucorrhœa, and erosion of os and cervix uteri (both acute and chronic), by the vaginal application of boric acid, and having also observed the rapidity with which the healing process is effected by the same treatment in cases of division of the cervix for stenosis, I not long since designed a convenient form of insufflator for the purpose. Thinking I could go a step further, and apply the acid to the endometrium itself, I found that by means of a slightly curved vulcanite tube (something larger than a No. 12 catheter), with tightly fitting rod or piston of the same material, I could *safely* do so. The tube spoken of is charged for about two inches from its point by drawing back the piston, and plunging the tube, point downwards, into powdered boric acid contained in some deep receptacle, such as a wide-mouthed bottle. The point of tube is then inserted into the uterus (the latter having been previously cleansed by my blunt wire curette, which holds the secretion doing removal), the piston is then pushed home, and a stick of compressed boric acid deposited in the uterus. (The patulous condition of the os and cervix existing in these cases facilitating the introduction of tube considerably.) By this simple means I have succeeded in curing quite a number of cases of this troublesome and intractable complaint, some of which had previously (both in my own practice and that of others) resisted the usual routine—caustic treatment. I also thoroughly dust over the vaginal walls with the powder *at the same time*. Judging by my own experience I should say that if this treatment be adopted (as described) the most chronic cases of endometritis should yield to a dozen such applications at most, at intervals of three or four days; *the all-important point being a thorough cleansing of all surfaces with which the powder is intended to come in contact.*

It is now some years since Dr. Redmond (Surgeon for the Eye and Ear at St. Vincent's Hospital, Dublin), having found the value of boric acid in cases of suppuration from the ear, was kind enough to suggest to me its suitability as a treatment in these cases; and it was while making trial of his valuable suggestion that I read a paper on the "Value of Boric Acid as a Vaginal Application in cases of Leucorrhœa," by Dr. Schwartz of Halle, which considerably strengthened the ideas I had formed as to its use. The facility with which the powder can be deposited on the cervix, os and vaginal walls by my insufflator, either with or without the speculum (the latter mode I prefer myself), saves a great deal of time and trouble. And this plan of treatment will be found on trial much more popular with both patient and doctor, than glceryine tampons or other moist or greasy applications.

The boric acid, besides acting as an antiseptic, astringent, and deodoriser, has also evidently some affinity for water (though not to so marked a degree as glycerine), so that it will also act as a depletant; and it will be only fair, when it has been freely applied, to notify this peculiarity of the powder to the patient. I have now given the treatment described a considerable trial, and have found it most effective even in three, at least, *inveterate cases* where the discharge had lasted for years, and where the patient had found it necessary to constantly wear a diaper or sanitary towel.

In the latter class of cases (just alluded to) using a *sharp curette* will be advisable before applying the acid.—Alexander Duke, F. R. C. P. I. in *Hosp. Gaz.*

THE TREATMENT OF PNEUMONIA BY LARGE DOSES OF DIGITALIS.

We have on one or two previous occasions called attention to the mode of treatment recommended by Dr. Petresco of combating pneumonia with large doses of digitalis, and in the *Therapeutische Monatshefte* for February, 1891, this author publishes an additional communication on this subject, in which he offers a number of arguments and reports of a number of cases to support his position as to the value of very large doses of digitalis in this disease. The dose which this author recommends is simply enormous in contrast to that which is ordinarily regarded as the safe dose of digitalis, Professor Petresco stating that he does not hesitate in single doses to give as much as 180 grains of digitalis-leaves in twenty-four hours, although he admits that ordinarily the dose for twenty-four hours does not exceed 25 grains. He prefers the infusion made with 4 parts of digitalis-leaves in 200 of water, and then adding 40 parts of syrup of orange-peel, the dose than being a tablespoonful every half-hour. He states that in general this dose is very well borne, and that he has never met with a single case of poisoning. Dr. Petresco meets the incredulity which has been expressed as to the tolerance of these large doses, with the explanation that he can only have employed inferior quality of digitalis-leaves, with a denial, and states that he has employed the leaves obtained from all the best pharmacists in Europe, with, as a rule, the same results. He states that he has obtained the best results in genuine fibrinous or

croupous pneumonia. In infectious pneumonia he has usually combined it with antiseptic methods. He also states that he has obtained satisfactory results in cases of pneumonia complicated with bronchitis and pleurisy, and he claims in the most positive manner to have cut short undoubted cases of croupous pneumonia, so that within twenty-four to forty-eight hours—the time necessary for the effects of the digitalis to be demonstrated—he has succeeded in obtaining sudden and almost absolute reduction of the temperature to the normal, accompanied with reduction of the pulse, while at the same time this disappearance of fever is accompanied by general improvement in the patient's condition, pain and cough being diminished, the temperature becoming normal, while the healing process rapidly goes on to completion. These large doses, with the exception of but rare cases, are without effect on the digestive canal, although sometimes he has met with vomiting as the result of this method of treatment. The most evident symptom detectable as to the effect of this medication is the marked slowing in the pulse, with increased tension. The author publishes a number of sphygmograms, illustrating the effect of digitalis on the pulse in cases of pneumonia, and concludes his paper with the following deductions:

1. Digitalis has an important antiphlogistic action only in its special therapeutic dose.

2. Its specific therapeutic dose of digitalis amounts to from 75 to 150 grains of digitalis-leaves administered as an infusion in twenty-four hours.

3. This dose may be administered in from two to four days continuously, according to the severity of the case. In some cases from 300 to 375 grains of digitalis leaves being given in four or five days without symptoms of nausea, or in fact, any toxic effect. Treated with this dose, the temperature in cases of pneumonia falls from 1° to 3° C. after a single dose, and from 5° to 6° C. after three doses, while the pulse is slowed from 40 to 60 beats in the minute after six doses. This reduction in the pulse-frequency and in the temperature lasts from ten to twelve days, by which time the normal condition has been gradually obtained.

4. Simultaneously with this diminution in the rate of circulation and respiration, disappearance of all the local symptoms of pneumonia can be noted.

5. The value of this method of treatment is proved by statistics, the mortality of cases of pneumonia so treated with high doses of digitalis being much less than that observable when any other method is employed.

6. The value and harmlessness of this therapeutic dose of digitalis is established by the author's numerous individual experiments and by the cases reported by his scholars.

7. From studies as to the value of this method of treatment the author concludes that the expectant method of treating pneumonia is not only irrational but even dangerous; that the assumption that there is a definite cycle of progress in pneumonia is not warranted; that pneumonia may be cut short by an energetic rational mode of treatment, especially if the method is inaugurated at the onset of the disease, and that, finally, the claim is supported that the treatment of pneumonia with large doses of digitalis furnishes better results than that obtainable by any other mode of procedure.—*Therap Gaz.*

TREATMENT OF CHRONIC BRIGHT'S DISEASE.

The danger in Bright's disease comes from insufficiency of the renal secretion This insufficient depuration of the blood by the kidneys leads to uræmia, which is the true danger. It is therefore necessary to make the patient urinate freely, but on condition of not over-exerting the kidneys. It is also necessary to sustain and stimulate the forces of the patient.

The aliment should contain very little albuminoid matter in proportion to fats and hydrocarbons. For the waste from the latter substances is not eliminated by the kidneys. All the substances which in these waste products contain nitrogenous products should be partaken of as little as possible.

Meat should be ingested in very small quantities. Dark meat or high meats, being rich in albuminous waste products, should be strictly prohibited.

Milk, although rich in albuminoids, does not produce much waste material, for all its nitrogen is utilized. It is rich in fat. None of its principles appear to irritate the kidney. Moreover, it is diuretic. It, therefore, not only furnishes no material for the kidneys to eliminate, but by its diuretic power it helps to eliminate toxic principles already existing in the organism. In the meantime most patients restricted to absolute milk diet become disgusted with it, refuse to submit to it, and later on finish by not being able to digest it any longer. Moreover, there is an advantage in not limiting patients to milk alone; one should allow them vegetables, fresh and dried bread, farinaceous articles, all of which augment the proportions of hydro-carbons. Again, individual predisposition must be considered in the choice of aliments. What benefits one might harm another. The products of bad digestion are rich in waste materials, which are liable to irritate the kidneys if they are eliminated completely, and which poison the organism if their elimination is insufficient. The albumen ought to be measured day by day.

Eggs, especially the whites of eggs, increase albuminuria, and ought to be excluded from the diet of those suffering from Bright's disease. The same is true of certain salt water fish.

Diuresis is produced by alkaline waters and ptisans. But cardiac lesions, so frequent in Bright's disease, render necessary the use of cardiac remedies. In the first rank of the latter comes crystallized digitalin, in doses of from one to two milligrammes. It is prudent not to use this medicine two days in succession, but to interrupt it for several days, so that its elimination may be complete.

Caffeine is recommended in gramme doses, especially by way of injection. Salicylate of theobromine is less active, even in three gramme doses. Strophanthus and squill are to be rejected on account of their irritating action on the kidneys. In the case of arterio-sclerosis, iodide of potash gives good results.

Revulsives over the lumbar region are very useful, especially in the period of renal congestion. Repose in bed, well covered, is to be recommended in preference to vapor baths, which might prove dangerous. Walking is not to be advised. It is rather harmful, though in a less degree than cold and moisture.

Senator, of Berlin, says: "I recognize the inability of medicine to combat albuminuria. Iodide of potash, though evidently without effect in parenchymatous nephritis, is perhaps very useful in the interstitial form coincident with sclerosis of the arteries, hypertrophy of the heart, etc." Here, evidently, the nephritis is secondary, and the iodide is able to cause the albuminuria to disappear, diminish the polyuria and secure prolonged remission. Semmola, Leyden, and others are of this opinion. Milk is a good remedy in appropriate cases, especially in parenchymatous nephritis, where there is little thirst. It is, however, to be avoided in sclerosis with polydipsia.—Lepine in *R. La France Med.*

IRRITABLE FISSURE OF THE RECTUM.

I have found this infirmity more frequent than one would suppose. Old physicians have told me they have never seen a case. I have certainly witnessed more than twenty well marked cases, when the simple operation of forcibly stretching the sphincter till all the fibres of the external sphincter were torn through, has given complete and permanent relief. The pain attending this lesion is atrocious, and nothing short of a cutting or divulsion operation has ever in my experience done any good.

The character of this lesion is very easily diagnosed. The patient has a severe aching pain, low down in the rectum, after defæcation; this pain lasts for hours, sometimes all day, is aggravated by purgatives, and does not readily yield to opiates, whether administered per os or per rectum. Examination by rectal speculum reveals a crack or ulcerous abrasion, easily bleeding on touch, just within the anal orifice; this fissure extends through the mucous membrane into the muscular fibres of the sphincter; it does not readily heal, for the sphincter by its contractions will not let it heal. If there be a few hours quiesence of the pain, this is sure to return the next time the bowels act, and a hard movement, attended with straining, brings with it exquisite agony. I have known patients to suffer for twelve hours after such a movment, and only get relief when repeated doses of opium were administered. Such persons will often avoid having fæcal motions as long as possible from dread of the inevitable suffering.

In the earlier part of my practice, I used to be greatly puzzled by these cases, and first became enlightened as to their real nature and treatment by reading Van Buren's practical treatise "On Diseases of the Rectum."

A patient on whom I performed the operation of forcible dilatation ten days ago, and who is now free from all pain and perfectly well, had been for two years an almost constant sufferer; had become haggard, emaciated, and cachectic. It may seem singular that so apparently trifling an ailment should cause so much and so constant distress.

In the case of this lady, all that was necessary was anæsthesia by ether, and forcible stretching of the sphincter ani till the fibres of this muscle were felt to tear. The patient was placed on her side, the two thumbs inserted back to back and forced apart till the palmar surfaces were made to touch the tuber ischii on both sides. Then all that remained to be done was to apply a warm carbolic dressing.

I have notes of more than twenty cases similar to the above which I have treated, and in every instance the result has been most gratifying.

Sir Benjamin Brodie, speaks of this disease, under the title of "Ulcer on the Inside of the Rectum." He says it may be found on the posterior part of the rectum, opposite to the point of the os coccyx, and occurs for the most part in persons who have costive bowels and hard stools, the mucous membrane, under these circumstances, being lacerated by the pressure of hard evacuation. When once produced, this ulcer is very difficult to heal, and, in fact, the only rational treatment is setting the sphincter at rest, either by stretching or by free divison with the knife; and surgeons since Brodie's time have been divided in the choice of methods; certainly both incision and dilatation give satisfactory results. To relieve pain is certainly a considerable part of a

physician's duty and he should be especially happy when he can relieve the pain by permanently removing the cause. What a noble and humane sentiment is that of Herzen—may it not well be the animating sentiment of every physician? —*Tout être qui souffre est également près de mon cœur.*

PHAGOCYTOSIS AND IMMUNITY.—The fact that one attack of a contagious malady, such as smallpox or scarlet fever, renders an individual immune against a second attack has never received adequate explanation. It is even more difficult to explain satisfactorily the immunity conferred on an animal by inoculating it with the attenuated virus of a disease which in its ordinary form is often, and in a few cases invariably, fatal, such, for instance, as protective inoculation for anthrax, chicken cholera, and the older method of vaccination to protect from or modify an attack of smallpox (*The British Medical Journal*). In a lecture recently delivered by Dr. Metschnikoff at the Pasteur Institute, an attempt is made to prove that the defending powers exercised by the amœboid cells of the organism are in a large measure concerned in conferring this immunity. The aggressive characters of these amœboid cells has earned for them the name of "phagocytes," and Metschnikoff points out that they are of different kinds, and originate in various ways. In connection with the subject of immunity, it is important to remember that these phagocytes can include and destroy micro-organisms; but the more malignant the micro-organism the more rarely is it found within the phagocyte, and this is especially true of such diseases as chicken cholera, hog cholera given to pigeons and rabbits, and anthrax of mice. All these diseases have the character of general acute septicæmia and cause death within twenty or thirty-six hours. According to the views expressed in this lecture, we are to believe that when the micro-organisms are attacked by the phagocytes, an animal may recover from the disease. In the malignant forms, where the phagocytes do not intervene—that is, phagocytosis or amœbic warfare is not established—then the bacteria overrun the organism, and induce death. This partiality of the phagocytes is attributed to their sensitiveness to external influences, and especially to the chemical composition of their environment. These cells are powerfully attracted by many micro-organisms, and repelled by others. This attraction and repulsion are expressed by the terms "positive chemiotaxis" and "negative chemiotaxis." Now the basis of the theory appears to be that the chemiotaxis of the phagocytes of a given animal is mutable, and that cells may be gradually attracted to substances in a mild form from which they shrink when presented to them in a concentrated form. Hence by inoculating an animal with an attenuated virus the chemiotaxis, previously negative, will acquire positive characters, and at last be induced to attack the micro-organism of a malignant disease should occasion arise. Any attempt to explain immunity from infectious diseases on a rational basis will be very welcome. The theory propounded by Metschnikoff is, like all the previous communications made by him on the subject of intra-cellular digestion, the outcome of patient and industrious observation, and must command our attention. His views, formulated for the first time in a consecutive manner in this lecture, promise to revolutionize opinions as to inflammation and fever, and this attempt to explain the power of the cells to confer immunity from infectious diseases is sure to be hotly contested, for every important contribution to this confessedly obscure subject must necessarily be in a large measure hypothetical.—*Med. Rec.*

TREATMENT OF OBSTRUCTION OF THE BOWELS BY LARGE DOSES OF OLIVE OIL.—Dr. E. W. Mitchell, of Cincinnati, reports two cases of successful treatment of obstruction by means of olive oil, this method of treatment being the result of a suggestion of Prof. Langdon. One of the patients, a man fifty-three years old, had had an operation for strangulated inguinal hernia on the left side, twenty months previously. When seen for his present trouble he had not been well for a day, there had been severe colicky pains and vomiting after each attempt to take food. Enemata were given on this and the following day with little result. Morphine was given, and large enemata through a rectal tube, introduced as far as possible, produced no effect. Almost two quarts of dirty fluid was withdrawn through a stomach tube. Two ounces of sweet oil were ordered to be taken every hour. Tympanites during the afternoon and early evening had rapidly increased. There was much prostration, no nourishment having been retained. During the night, half a pint of oil was taken. In the morning there was less prostration; there had been a small fluid passage. An enema, now administered through a rectal tube (English gum catheter, No. 16) returned slightly discolored, and containing a trace of oil. There was a recurrence of vomiting, but the oil was continued. About noon the bowels began to move, and several fluid stools were passed during the following night. On the next day the stools became formed and contained pus in small quantities. The case was probably one of fæcal impaction—there were no evidences of typhlitis or perityphlitis.

The second was that of a young man twenty-two years old. The bowels had not moved for forty-eight hours, and he had been suffering from tormina and vomiting. Large doses of cathartics had already been taken. Thorough examination

failed to find any evidence as to the point of obstruction; the hernial openings were clear, there was no point of tenderness, no tumor, the abdomen was quite tympanitic. He was treated by sulphate of magnesia, repeated clysters through a rectal tube introduced as far as possible into the bowel, and sufficient morphine to control extreme pain. This treatment was continued for two days with no benefit the tympanites increasing, vomiting becoming stercoraceous, and the patient much prostrated. The administration of sweet oil was then begun; a pint was taken within a few hours, most of which was retained, although he had before been vomiting everything. Three hours after beginning the oil the bowels began to move, and a good recovery ensued.

Dr. Langdon mentions in the same journal eight cases where relief had been obtained from large doses of olive oil.—*Cincinnati Lancet-Clinic.*

INSOMNIA IN INFANTS.—Dr Jules Simon considers insomnia a symptom of much importance in infants. In many diseases it is a symptom of minor importance, and of no special interest. In others it is one of the chief manifestations of the disease. The influence of dentition has been greatly exaggerated. Unless congestion of the gums or surrounding parts is present, it causes but little disturbances of the sleep. Dyspepsia and indigestion are the most common and universal causes of disturbed sleep, even without the definite symptoms of vomiting, diarrhœa, or marked constipation. A discussion of the treatment would involve a review of the whole subject of dietetics. Causes referable to the nervous system probably occur next in frequency. All young infants may, even in the first year, present evidences of acute cerebral congestion. Extremes of either cold or heat may produce the same result. A child that has been exposed to a strong wind during its daily airing, or one that has had insufficient protection from the sun, may pass a restless and uncomfortable night. This condition must be distinguished from the insomnia of meningitis, which, in some cases, is for many days the only sign. In older children, headache due to overtaxing of the brain is not uncommon. Anæmia and rapid growth in conjunction with over-study, is a fruitful cause of insomnia. In children, of rheumatic parents this tendency is especially marked. Among the nervous causes in these older children, hysteria, chorea, and epilepsy are the most common. The young hysterical subject is always liable to insomnia, with or without headeache. Some attribute all headaches of this period to hysteria, but the author believes that the distinction should be carefully made between such headaches and those due simply to rapid growth and overstudy. The insomnia of epilpesy is peculiar to itself, and is sometimes the only symptom for a considerable period. The child suddenly wakes from profound sleep, sits up, and begins to cry, but soon lies back as if exhausted, and falls into a deep sleep. These attacks are accompanied by incontinence of urine. Insomnia complicating chorea is an exceedingly grave symptom. Earache is always followed by insomina, and usually by continuous crying. Hernia is a cause of pain and sleeplessness that is frequently over-looked. Intermittent fever is in some cases marked by wakefulness at a definitely recurring period. Insomnia and headache are prominent and early symptoms of albuminuria.—*New York Med. Jour.*

TREATMENT OF EFFUSION IN THE KNEE-JOINT.—In the London *Practitioner* for February, 1891, Owen describes his treatment for effusion into the knee-joint. He says:

In some instances the aspirator was employed, but in others the distended joint was dealt with by a hydrocele canula of about the gauge of a No. 1 English catheter. In the use of either instrument the surgeon must take care that it is aseptic, and that the skin through which it is to be introduced is not only "cleansed" but clean. Moreover, he must not operate with "unwashen hands." Another point to be attended to when using the canula is that just as the fluid is ceasing to flow the surgeon should block the end of the instrument with his finger, and so withdraw it that he does not introduce air into the joint.

A canula thus used is as safe as an aspirator, and it has this recommendation, that it is sure to be in working order. If an ordinary canula and trocar cannot be used with security, peritoneal cavities, ovarian cysts, and vaginal tunics should have been in the habit of suppurating. This we know is not the case. It is very much the fashion now, however, to drop the simple word "tapping," or its equivalent "paracentesis," and, with a homage to euphemism, to employ the term "aspiration."

To the practitioner it matters not whether the fluid is blood or sero synovia. He has merely to obey the indication. If the joint has begun to swell up directly after the injury, the distending fluid must be blood; but if a day or more have intervened between the hurt and the swelling, the fluid has been poured out by the inflamed synovial membrane. Such fluid is a mixture of synovia with serum; often it is stained with blood.

Dr. Owen has never known any trouble to follow the tapping of a joint; he adopts it as a routine treatment in the case of fracture of the patella as well as in the more simple variety of distention.

As a rule, the puncture is made to one side of the patella. When withdrawing the canula the track is obliterated by firm pressure with the finger. The skin punctured is covered with a

scrap of lint dipped in collodion, or by a little pad of dry wool. The knee, together with the upper half of the leg and the lower half of the thigh, is then enclosed in lateral splints of house-flannel and plaster-of-Paris. The limb is fixed in the extended position, the foot being slightly raised. The firm pressure which is made around the joint is comforting, and it effectually prevents further effusion into the synovial membrane.

Having watched the effect of this method of treatment, Dr. Owen can honestly say that, should he have the bad luck to be the subject of acute traumatic hæmarthrosis or sero-synovial effusion of the knee, he would most certainly have the joint treated in the manner described. And he should ask that the site of puncture might be first numbed by the application of a piece of ice and some salt

THE PROPER METHOD OF APPLYING THE OBSTETRIC FORCEPS.— Dr. Henry D. Fry urges, as the only rational method, the application of the forceps to the sides of the head of the child without reference to its position in the pelvis. He refers to a former paper in which it was stated that 51 per cent. of prominent obstetricians followed this rule; while 35 per cent. applied the blades in the transverse diameter of the mother's pelvis without reference to the position of the head, and 11 per. cent observed no rule and followed either method. He admits that had the great body of the profession been consulted, the majority would be found to apply the forceps according to the German method, and also that in some cases it may be and is impossible to do otherwise. Certainly the difficulties of application are increased when the first method is chosen, and it would be better for a beginner to resort to the second, until some facility is acquired. In France it is the practice to apply the forceps to the sides of the head even when transverse at the brim, and the ideal method of extraction is to apply the instruments in such a manner that during traction the fœtal head is free to execute all the movements that would occur were the labor normal. To accomplish this it is necessary: (1) To grasp the sides of the head with the blades. (2) To make traction in the axis of the pelvic canal. (3) To secure mobility of the head during its passage, by the use of the Tarnier forceps. The Hodge style of forceps should not be used when their application is made without reference to the child's head, and the Simpson style (Elliot's) should not be used when their application is to be made to the sides of the head. Dr. Fry's conclusions are: (1) Anesthetize the patient and place her in proper position—buttocks well over the edge of the bed, and each limb supported by an assistant. (2) Ascertain the position of the head, introducing within the vagina two or three fingers, or, if necessary, the whole hand. (3) Apply the blades of a Hodge type of forceps to the sides of the head, with the concave edge directed toward the occiput. If, for any reason, this cannot be accomplished, withdraw the instrument and substitute a Simpson [or Elliot], passing the blades to the sides of the pelvis. While making traction with this method, watch for anterior rotation of the occiput, and encourage it in some cases by re-applying the blades to better advantage. (4) Make every effort to secure antiseptic conditions during the operation. The fingers, hands and forearms of the operator, the external genitalia and vagina of the patient, the instruments and the hands of the assistants, should be clean and aseptic.—*American Journal of Obstetrics.*

TRANSMISSIBILITY OF SYPHILIS.—As published in his magnificent *Atlas of Venereal and Skin Diseases*, Prof. Morrow's conclusions in reference to the hereditary transmissions of syphilis are:

1. A syphilitic man may beget a syphilitic child, the mother remaining exempt from all visible signs of the disease; the transmissive power of the father is, however, comparatively restricted.

2. A syphilitic woman may bring forth a syphilitic child, the father being perfectly healthy; the transmissive power of the mother is much more potent and pronounced, and of longer duration, than that of the father. When both parents are syphilitic, or the mother alone, and the disease recently acquired, the infection of the fœtus is almost inevitable; the more recent the syphilis, the greater the probability of infection, and the graver the manifestation in the offspring.

3. While hereditary transmission is more certain when the parental syphilis is in full activity of manifestation, it may also be effected during a period of latency when no active symptoms are present.

4. Both parents may be healthy at the time of procreation, and the mother may contract syphilis during her pregnancy, and infect her child in utero. Contamination of the fœtus during pregnancy is not probable if the maternal infection takes place after the seventh month of pregnancy. —*Cincinnati Lancet-Clinic.*

MR. EDISON'S EXPLANATION OF THE AMPERE AND THE VOLT.—During a recent examination a lawyer put the following question to Thomas A. Edison:

"Explain what is meant by the number of volts in an electric current?" To which he replied:

"I will have to use the analogy of a waterfall to explain. Say we have a current of water and a turbine wheel. If I have a turbine wheel and allow a thousand gallons per second to fall from a height of one foot on a turbine, I get a certain power, we will say one-horse power. Now the one

foot of fall will represent one volt of pressure in electricity, and the thousand gallons will represent the ampere or the amount of current. We will call that one ampere. Thus we have a thousand gallons of water or one ampere falling one foot or one volt or under one volt of pressure, and the water working the turbine gives one-horse power. If, now, we go a thousand feet high, and take one gallon of water and let it fall on the turbine wheel, we will get the same power as we had before—namely, one-horse power. We have got a thousand times less current or less water, and we will have a thousandth of an ampere in place of one ampere, and we will have a thousand volts in place of one volt, and we will have a fall of water a thousand feet as against one foot. Now the fall of water or the height from which it falls is the pressure or volts in electricity, and the amount of water is the amperes. It will be seen that a thousand gallons a minute falling on a man from a height of only one foot would be no danger to the man, and that if we took one gallon and took it up a thousand feet and let it fall down it would crush him. So it is not the quantity or current of water that does the damage, but it is the velocity or the pressure that produces the effect."

It has been calculated that the electromotive force of a bolt of lightening is about 3,500,000 volts, the current about 14,000,000 amperes, and the time to be about 1–20000 part of a second. In such a bolt there is an energy of 2,450,000,000 watts, or 3,284,182 h. p.—*Scientific American.*

STRYCHNINE IN ALCOHOLISM.—Dr. Pombrak reports the effect of strychnine in four cases of chronic alcoholism and three of dipsomania. The results were excellent in all but one case; the patients ceased drinking, and in one case the improvement has already lasted nine months. He advises the employment of strychnine in inveterate inebriety as well as in dipsomania. He insists on the prolonged continuance of the treatment; its duration should be proportionate to the duration of the disorder. He considers the dose of one milligramme insufficient; in moderate cases two milligrammes daily are required, while in old and inveterate drinkers, double this amount may be used. He ascribes the failures of some physicians to the insufficiency of the dose employed. He claims that the peripheral neuritis common in alcoholic cases sometimes disappears under the influence of strychnine.—*Jour. de Méd. de Paris.*

EMMENAGOGUES AND PREGNANCY.—Dr. L. Atthill finds that, in his own experience, some of the so-called emmenagogues are practically devoid of special action upon the uterus. For many years he has made a practice of administering ergot to patients threatened with abortion, hæmorrhage being present but uterine action not having been excited. He finds that it checks hæmorrhage without exciting undue uterine contraction, and accordingly he does not hesitate to give it to pregnant women if for any reason it seems to be indicated. He has often administered ergot before labor in cases where there is a predisposition to *post partum* hæmorrhage. In none of these cases has labor set in earlier than was expected, while in two or three cases it has been delayed. From personal experience he believes that iron, quinine and strychnine can be administered to pregnant women in ordinary doses with perfect safety.—*Brit. Med. Journal.*

PACKING THE VAGINA IN PREGNANCY-VOMITING.—The obstinate vomiting in early pregnancy is in many cases due to displacement, acute flexion generally, writes Dr. MacKinnon in the February *Journal of Obstetrics.* In two instances he relieved the displacement by packing the vagina with absorbent cotton, and in both the vomiting ceased almost immediately. These patients were in such a critical condition that the induction of abortion was in contemplation.—*Pacific Med. Jour.*

THE recent announcement that Professor Mosetig, of Vienna, has discovered a cure for cancer, the details of the remedy being kept secret, has induced an Irish poetic genius to write some lines on the secret discoveries of our continental *confrères*, which are published in a Dublin journal. The author in the belief, no doubt, that his sentiments and mine are in unison, has placed the verses at my disposal, but I can only find space for the three following:—

Our lip we can't help curlin'
  At the medical prefesh;
Sure, there's Doctor Quack, of Berlin,
  Always finding something fresh
To prevent mankind from croaking,
  And to load himself with fame.
This is not a theme for joking,
  But—we get there just the same.

* * * * * *

Here's a man has struck a plan, sirs—
  So the daily papers say—
To prevent the growth of cancers,
  And we only hope he may;
All the things they'll soon be healing
  To which one can put a name—
Yet we're haunted by a feeling
  That we'll get them just the same.

O confound all foreign "masters"
  With a secret to disclose!
We believe in mustard-plasters,
  And put tallow on our nose.
Let the savants of Vienna
  Spin their narratives so lame—
If we stick to salts and senna
  We can get there just the same.

—*Hosp. Gaz.*

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AGENTS.—DAWSON BROS., Montreal; J. & A. MCMILLAN, St. John, N.B.; GEO. STREET & Co., 30 Cornhill, London, Eng.; M. H. MANLER, 23 Rue Richer, Paris.

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THE LITERARY EQUIPMENT OF THE AMERICAN MEDICAL MAN.

A very recent graduate of Old Trinity, in Medicine, has been resting on his oars while waiting for the dust to settle (in spite of this mixed metaphor, he is not Irish), and, inasmuch as rest intellectual, lies not in inactivity of mind, but in change of mental occupation, has been dipping once more with delight into reading, not medical, or at least, not technical. If the overwrought medical student or practitioner, at times when, as is inevitable, disgust rises in his soul and whelms him fathoms deep at the weary round of "shop," practice, late and accumulating professional literature, all with tiring reiteration, conspiring to keep his nose at the eroding grindstone, if at such unquiet moments he would only turn to the vast field of æsthetic and not utilitarian literature, he would find it, even in homœopathic doses, a prompt antidote to his sensation of satiety. Not that it would act as did the doses taken, as Tacitus, I think it is, records, at those Neronian orgies, when repletion was realized by a temporary retirement from the table of Bonlimia. On the contrary, the very joy of retreading the paths, now by press of work forbidden him, and dipping, if only a half hour, into Horace, or Tennyson, or Harper's, or the pages of that most genial of the genial profession, Dr. Oliver Wendell Holmes, by sheer force of contrast would enable him to return with zest re-awakened, to the pages of his medical journals and to his case-reading in the standard works. Reflections such as these led our new-fledged master in Chirurgy to certain animadversions upon the general literary style and tone of English and American professional literature. And his animadversions were unpleasant, or at least, would have been, could the writers he criticized have spent a quarter of an hour within hearing of his thoughts. He concluded that very few medical text-books are passably written, or to be read with pleasure by one who is hypercritical in the matter of his English. Most notable exceptions do exist, especially among English as against American writers—Michael Foster's Physiology, Fagge's Medicine, are examples. The reason of this difference, and the comparison is not meant to be odious or invidious, is plainly that the average literary and primary training of the American student is so low. After entrance upon a course of study so exacting as the medical student's, further advance in general culture is impossible except in so far as the mind is improved by the gymnastics through which it is put by the study of medicine as well as of any other subject. The medical man, on the other hand, who before his medical career began, had been blessed with a fair training in the Greek and Latin and English Classics, Ancient and Modern History, a dip into Moderns and Mathematics, such as an English public school career provides, is not by any means such a *rara avis* in England as in Canada, and the United States. Now this is not meant as a slur upon American practitioners. It were unkind to upbraid them with their misfortune. The social and economic conditions of the new country call upon the general public to put up with many new, raw, and unpleasant things, among them a medical profession of no high grade of attainment in things outside their own special branches of knowledge, and as time goes on this state of affairs is rapidly curing itself. So far as professional training, zeal, acumen, and ingenuity are concerned, no set of surgeons in the world have proved themselves more capable than the surgeons of America. This side the Atlantic is admittedly the home of elegant pharmacy. Why then are American degrees in medicine so ill thought of in most European centres, that the holders of them can get no more recognition than if they were just beginning their studies?

The reason is twofold, and the blame lies perhaps evenly at the doors of either party. On the one hand insular and provincial ignorance and prejudice, and dull wholesale indiscriminating refusal to take any trouble to differentiate a really good American degree such as that of Bellevue, New York, from the fraudulent degree, stolen and forged, or given after a year's study by some congeries of criminals styling themselves a University, not a few of whom may be found serving long terms of imprisonment for their fraudulent practices in various parts of the United States. On the other hand it is undoubtedly true that there are humbug and quackery, and deception, and abominably inadequate and irresponsible medical training in the United States more than in any other country. How far this is due to mere supineness, how far to the connivance of politicians under their democratic form of government, and how far to the fact that there is no federal control of educational matters, and that uniformity of standard is thus precluded by their constitution, we cannot here discuss. Each of the three factors, however, must enter into the calculation.

(*To be continued.*)

THE INFLUENCE OF STAYS ON THE ABDOMINAL VISCERA.

At a meeting of the Dresden Gynæcological Society in January, 1891, Dr. Meinert read a paper (*Brit. Med. Jour.*) embodying the results of sixty-three *post-mortem* examinations of patients in whom the thorax had been compressed by stays. The normal relations were invariably disturbed. The liver and stomach were usually pushed downwards, more rarely upwards, and in the majority of cases enlarged. The stomach mostly lay with its long axis vertical, and often fitted into a corresponding depression on the surface of the liver. Depression of the great intestine was almost constant, the hepatic flexure being mostly involved. The transverse colon was often disturbed in the most remarkable manner, hanging down in some cases so that its middle part almost reached the pelvic cavity. In these displacements the stomach had, as a fixed point its cardiac end, the large intestine its splenic flexure. Equally precise determination of the displacements of the pelvic organs was not possible, owing to senile changes in many of the bodies. The right kidney was frequently moveable, as many recent authors have already noted. Dr. Meinert believes that in living women, retroflexion is the most frequent displacement of the uterus. A case of nephrorrhaphy for floating kidney was also noted; three-quarters of a year after the operation the kidney again became displaced. Bergmann has observed similar failures; it is certain that women who have undergone nephrorrhaphy should not wear stays. The median displacement of the stomach and the pushing down of the colon was best diagnosed during life, forcing air into those parts of the alimentary canal. The displacement and distension were to be remedied by small meals, taken frequently, and by avoiding fluids in bulk, which injured the stomach. The diet must be substantial and of a nature to stimulate peristalsis; hence a kind of whole-meal bread was recommended. Indeed, Dr. Meinert advocates the swallowing of small quantities of sand for "internal massage" of the stomach.

It may be remembered that at the International Medical Congress, London meeting, 1881, there was some discussion as to whether the long axis of the stomach was not normally vertical. Dr. Leopold stated, in reply to Dr. Meinert, that he had seen the stomach so placed in cases where there was no constriction of the thorax from stays. Some of the changes in the hollow viscera might be due to defective nutrition.

HOW LAWSON TAIT DOES A SUPRA-PUBIC CYSTOTOMY.

[We have lately received the following letter, which will be of interest, as showing pretty vividly the iconoclastic tendency of the above great operator.]

Since my arrival in Birmingham I have had the pleasure of seeing Mr. Tait perform this operation once. The patient, a man well up in years, was very stout, weighing (I should think) 300 pounds, with very thick abdominal wall, fully five inches over the bladder, in consequence of which the operation was a most difficult one. This difficulty, however, seemed rather to please the fancy of the operator than otherwise.

The patient being ready, all rules laid down by

other surgeons were ignored by Mr. Tait as unnecessary and a waste of time. With no rectal bag placed, no fluid in the bladder to distend it and push up the peritoneum, and with no sound even in the bladder as a guide, he cut rapidly down through the thick abdominal wall in direction of the bladder to the muscle, on reaching which he divided the tendon transversely, closely hugging the pubic arch, and with finger in the wound felt for and found the viscus.

Without waiting to sponge away blood, he caught up its wall with a couple of pairs of long forceps and opened it between the forceps with the point of a scalpel, in the same way as he would open the peritoneum in abdominal section. Then introducing his finger he explored, passed in a pair of placental forceps, caught and dragged out a stone measuring two inches by an inch and a-half. Then introducing an abdominal glass drainage tube into the organ, he sutured the bladder wound above and below the tube, and finally closed the external wound around the tube, the whole operation not lasting more than ten minutes.

London, Ont. H. Meek, M.D.

DR. COULTER'S COMBINED VAPORIZER AND INHALER.

We desire to express our very satisfactory experience in the use of the above Inhaler. The points which we consider especially worthy of notice in this instrument are, firstly, its extreme simplicity. One draw back often experienced in the use of inhalers when left in sick rooms is their liability to get out of order. This is impossible with so simple an apparatus as this one; a vessel of water, a spirit lamp and a sponge constitute the main parts of the apparatus. Secondly, as a spray producer it cannot be too highly valued, and to those who have never employed it, it might at first seem incredible that such an immense diffusion could be produced from so small a quantity of disinfectant or volatile oil used with one of the smallest instruments. Only a few minutes, are required to permeate an entire house. As a means of disseminating a disinfectant, it would be difficult indeed to surpass it; also as a means of introducing moist air into a chamber, so often required in the bronchial affections of children. It is an admirable contrivance, distributing the moisture evenly and rapidly. For disinfecting the room and clothing it is equalled only by the super-heated steam chamber, and where such cannot be obtained, the large inhaler of Dr. Coulter's can be substituted with advantage. It can be used in any room large or small, no preparations being requisite; but the least valuable use to which the vaporizer can be put is the perfuming of rooms. We know of an instance where half a drachm of essence of lilac was sufficient to perfume a large house with the sweet smelling aroma by the aid of the vaporizer. Altogether we commend it as one of the best vaporizers for sterilizing rooms and producing hot or cold vapors as required.

Painless Circumcision.—Dr. G. W. Overall, in the *Med. Record*, gives the following as his method of circumcision. Apply a rubber band around the penis half an inch back of the corona, in order to limit the effects of the cocaine. Place a pillow on patient's chest to prevent his seeing the operation; then, with a small blunt-pointed syringe, inject a few drops of a freshly prepared 30 per cent. solution of cocaine into the preputial orifice. Hold the end of the prepuce with the left hand, to prevent escape of the fluid, and with the right hand force the latter to come in contact with the entire mucous membrane. Hold the prepuce in this manner for five or six minutes, when the membrane will be anæsthetized. Now inject the necessary amount of the solution into the tissues of the foreskin, taking care that the needle is passed through the mucous layer instead of through the skin, pain being felt if the latter procedure be adopted. The operation can be carried out in this way without the slightest sensation of pain being felt. Absorbable sutures should be used.

Hydrochlorate of Ammonium by Inhalation in Membranous Croup.—In the *Medical Record* (*Therap. Gaz.*) Dr. Dwight L. Hubbard calls attention to the use of hydrochlorate of ammonium in laryngismus stridulus and laryngo-tracheal diphtheria. Dr. Hubbard believes that this ammonium salt is of value, in the first place, as a heart stimulant, producing better oxidation of the blood, by bringing it in more frequent contact with the inspired air; second, in relieving the spasm and œdema of the glottis; and, third, in softening the false membrane. His method of employing this remedy is to place the patient in a

small closed room, having a temperature of about 80° F., then generating sufficient heat to drive off copious fumes. This is continued for fifteen minutes, and repeated every hour; while after each application the room should be ventilated as much as possible without reducing its temperature. Dr. Hubbard writes, that after the use of this remedy so employed copious perspiration follows, the breathing becomes less stridulous, the mucus softer and more easily expectorated, and sleep generally is produced.

INFLAMMATION IN AND ABOUT THE HEAD OF THE COLON.—Dr. L. S. McMurtry, of Louisville, Ky. (*Med. Mirror*), thus concludes a paper on this subject:—1. Inflammation about the caput coli is, as a rule, inflammation of the appendix. 2. A certain proportion of cases will recover spontaneously by resolution. With these, recurrence of the disease is common. 3. In the larger proportion the disease will endanger life, and may at any moment assume a condition practically hopeless. 4. Early operative interference involves less danger than delay, and should be resorted to in all cases in which a high grade of inflammation is persistent. The essentials of the operative technique are brief anæsthesia, quick and thorough work, removal of the appendix, irrigation and drainage. The lateral incison is preferable to the median.

THE LOCAL USE OF OIL OF WINTERGREEN IN RHEUMATISM.—The *Mercredi Médical* mentions that Dr. Staples, of England, has, for the past four years, been using oil of wintergreen in the local treatment of rheumatic affections, sub-acute and chronic. He employs a liniment of equal parts of oil of wintergreen and olive oil, afterward keeping the member covered, and says that the pains disappear at the end of from four to six hours. It is, moreover, efficacious in the chronic form. Of over a hundred patients so treated, two only have received no benefit.

PEROXIDE OF HYDROGEN FOR CLEANING THE HANDS.—Noble (*Med. and Surg. Rep.*) advises the following method for rendering the hands aseptic: The nails are trimmed reasonably short, and the subungual spaces cleared with the knife blade. The hands and forearms are then thoroughly washed in warm water, a good lather being made with soap, and a stiff nail-brush being vigorously applied. The water is renewed three times. The hands are next soaked in a saturated solution of permanganate of potassium, and this removed by soaking them in a saturated solution of oxalic acid. According to circumstances, the finger tips are then soaked in peroxide of hydrogen. For the final bath, corrosive sublimate solution, one to one thousand, is employed. The hands remain in the sublimate solution three minutes.

SUMMER DISTURBANCES OF CHILDREN.—In fermentative disorders of the alimentary canal in the young, middle-aged or old, Listerine has given most satisfactory results. In the summer diarrhœa of children, Dr. I. N. Love, of St. Louis, speaks very highly of it, given in combination with glycerine and simple syrup. A formula that I have time and again used—in fact, it has almost become routine with me of late years—is as follows:

℞—Bismuth subnit.,	. . . . .	ʒ ss.
Tr. opii,	. . . . .	gtt. xx.
Syr. ipecac.,		
Syr. rhei arom.,	. . . . .	āā ʒ ij.
Listerine,	. . . . .	℥ ss.
Mist. creta,	. . . . .	℥ j.

M. Sig.—Teaspoonful as often as necessary, but not more frequently than every three or four hours. This for children about ten or twelve months old.—D. J. Roberts, M.D., in *South. Pract.*

CHLORAL VS. IODINE FOR INJECTING CAVITIES.—M. Marc See states that he has found a 10 per cent. solution of chloral hydrate to act equally as well as tincture of iodine as a coagulant for injecting hydroceles and other cavities, and to be devoid of the intense irritation and pain frequently caused by the latter. In hydroceles M. See injects about 30 gm. at once into the sac, repeating the operation two or three days later. He also uses the chloral solution as an injection in treating varicose veins, the introduction being made in the neighborhood of the varices.

ANTIPYRIN IN INFANTILE ENURESIS.—Dr. J. Bouisson (*Thèses de Lyon*) states that the effect of antipyrin in the treatment of the enuresis nocturna of childhood are "simply marvellous." The remedy is exhibited in doses of 10 grains, repeated to the third time (30 grains in all), at intervals of one

hour, commencing four hours before bed-time. Of eight inveterate cases in which the disease had existed for several years, and upon which every other remedy and method of treatment had proved futile, every case was completely cured. Several months have elapsed since the treatment, and in no case has there been a relapse, nor have any symptoms of return been noted.

To Sterilize Instruments without Dulling them.—Von Bergmann's method.—To render instruments perfectly aseptic, and to preserve the cutting edges from oxidation,(*Med. and Surg. Rev.*,) they are boiled for five minutes in a 1 per cent. solution of carbonate of soda. They can remain in this solution indefinitely, without rusting or dulling the cutting edge. When required for operation they are taken out, dried with a sterilized piece of gauze, and handed to the operator. Whenever, in course of the operation, they come in contact with anything not aseptic, all that is required to re-sterilize them, is to dip them for a few seconds into the boiling solution of sodium bicarbonate.

Smart Sayings of Dunces.—A student (says the *Med. Rec.*) taking the examination before the State Board of Examiners of Virginia for license to practice gave the following startling information: "Symptoms of œdema of the glottis are that the patient feels husky and has sore throat. I would amputate it if necessary. I would do the operation within three or four months if it was a bad case." That is about on a par with the man who said that in post-partum hæmorrhage he would ligate the post-partum artery, or the one who thought that pyelitis was inflammation of the *pyloric end* of the stomach.

For Alcoholic Excesses, etc.—Dr. Hooved (*Cincinnati Lancet and Clinic*) gives the following:

℞—Chloral hydrate,
Potassium bromide, . . . āā ʒ iv.
Extract cannabis indica,
Extract hyoscyamus, . . . āā gr. xiv.
Chloroform, ... ʒ ij.
Water (boiling), to . . . O ij.

Dissolve the cannabis in the chloroform, and add the chloral hydrate. Pour on this the boiling water, and then add potassium and hyoscyamus. When cold, filter. Combined with aromatic spirits of ammonia, we get a safe and efficient remedy for alcoholic excesses and other forms of acute mania in which insomnia, delirium, and like symptoms are manifest.

The "Potato Cure."—The potato seems to be taking the place of laparotomy and gastrotomy in removing foreign bodies introduced into the alimentary canal. Several cases have been reported in which screws, nails, pins, etc., have been successfully carried through the alimentary canal of children who had swallowed them accidentally. Potatoes should be fed in large quantities, and as they leave a large residue, the foreign body becomes imbedded in them and passes off on moving the bowels with a mild laxative, on the fifth or sixth day.

Phthisis.—Dr. O. P. Bennett, Chicago, reports (*Weekly Med. Review*) several cases of phthisis treated by subcutaneous injections of solutions of iodine and of chloride of gold and soda, and inhalations of chlorine gas. He commenced by giving hypodermic injections of the solution of iodine, equal to one-twentieth of a grain, which was gradually increased to one-sixth of a grain, daily for a week or two, except when symptoms of iodism, disturbances of the alimentary canal, or loss of strength were manifested, when he changed to the chloride of gold and soda solution, which was gradually increased from one-twenty-fourth to one-eighth of a grain. He believes this treatment to be of great benefit in many cases of phthisis, of no benefit in others, while in others it seems to hasten death.

Morphinism.—The following is useful in breaking off the habit, modifying it to suit special cases:—

℞.—Morph. sulph. or tr. opii., . q. s.
Fl. ext. viburni prunifol. . ʒ ss.
Elixr. ammoniæ valerianæ, . ʒ iij.
Elixr. sodii. bromidi, (gr. v. to the ʒ) qs. ʒ vi.
Sig.—ʒi. when required.

The physician must get the confidence of the patient, by assuring him that the substitute employed will absolutely take the place of the drug. W. J. Cottell states in the *Am. Pract. and News*, that he has positively cured over forty cases by this means.

EARLY SYMPTOMS OF PREGNANCY.—Waldo (*Post Graduate*) reviews the symptoms of early pregnancy with their diagnostic value. He regards suppression of the menses as only corroborative, and not a symptom of any great value in itself, since suppression may occur from many causes other than pregnancy, and menstruation may persist during some months or the whole of gestation. Digestive disturbances are of little diagnostic value. Changes in the mammæ—as dilatation of the veins on their surface, a sense of weight, darting pains, and an increase in their size are of some diagnostic importance. It has been claimed that milk or colostrum in the breasts of a millipara was positive evidence of pregnancy, but there are a number of cases reported that prove the fallacy of this statement. Montgomery considered that the development of a secondary areola, and of the elevations named after him, were positive evidence of a gravid condition. Still, Montgomery's glands may develop in women who are suffering from some form of inflammatory disease of the uterus or its appendages. Pigmentations and the shape of the abdomen are of very little importance. A number of writers have mentioned blueness of the vulva as a very important early sign of pregnancy. It is such if the uterus is in its normal position, if there is no obstruction to the general return circulation, and no inflammatory disease in the uterus or its appendages. The most important of all the early symptoms of pregnancy is the so-called "Hegar's sign." This consists in a loss of the nulliparous pear shape of the uterus. Its contour no longer gradually diminishes as it approaches the uterine neck; the body, on the contrary, bellies out over the cervix in the transverse diameter, in particular antero posteriorly, and the organ, instead of being pear-shaped, resembles very much an old-fashioned, pot-bellied jug. This sign can be obtained as early as the sixth or eighth week of gestation, and is produced by nothing but gestation alone.

JOSEPH P. ROSS, A.M., M.D., Prof. Clinical Medicine and Diseases of the Chest, Rush Medical College, Chicago, Ills., says: For the past three years I have prescribed Bromidia very frequently, and have never yet been disappointed in securing the results required. In cases when there is insomnia without pain, in the delirious stages of acute fevers, in delirium tremens, puerpural mania, in short, in all those cases requiring soporifics, I find Bromidia invaluable. I consider Bromidia an excellent combination.

CYSTITIS IN WOMEN.—The *Jour. de Méd. de Paris* gives the following prescription for cystitis in women:

℞.—Citrate of potassium, . . . ½ ounce.
Fluid extract of triticum repens } of each 1 "
Tincture of belladonna, }
Fluid extract of buchu, ... ½ "
Water, a sufficient quantity to make 4 ounces.

A teaspoonful in a wineglassful of water three times a day.

BALANITIS.—Dr. W. R. Chichester states that he has obtained good results from the employment of the following (*Med. Rec.*):

℞.—Atropiæ sulphatis, ... gr. j.
Zinci sulphatis, ... gr. ij.
Ac. boracic, ... gr. v.
Aq. destillat, ... ʒ j.—M.

Sig.—Apply two or three times a day with a brush.

DR. DE LALLIS reports (*Therap. Gaz.*), the use of creolin in scabies in the form of a five-per-cent. ointment, rubbing it once daily into the affected parts. Only four such applications are said to be necessary to produce perfect cure. Creolin, in his opinion, is preferable to any other remedy for this purpose, especially possessing the advantage over sulphur of not producing any eczema of the skin, and not staining either the skin or the linen.

FOR RICKETS.—In the *Jour. de Méd. de Paris* the following prescription is given for the treatment of rickets:

℞.—Phosphorus, ... gr. j.
Absolute alcohol, ... ʒ v.
Spirits of peppermint, . . gtt. xxx.
Glycerin, ... ʒ ij.—M.

Sig.—Six drops of this mixture in water three times a day, and after one week another drop may be added.

COLD IN THE HEAD.—For cold in the head, while in the acute congestive stage, there is no better remedy than gelsemium (*Med. Compend*). One large dose, say 10 minims of the fluid extract, taken upon going to bed, will effectually dispose of this troublesome and uncomfortable affection.

DANGER OF SULPHONAL.—Says *The Lancet*, although sulphonal is probably one of the safest, as it is one of the most efficacious, among the hypnotics recently introduced, the series of cases published by Bresslauer of Vienna shows clearly that it has certain dangers. The degree of peril is difficult to estimate, as the patients were lunatics, and were also apparently feeble; but the fact is significant that out of seventy-seven patients who were treated with the drug, no less than seven showed serious symptoms, and in five of these there was a fatal termination. It ought to be mentioned that the patients had been taking the drug for a considerable time in good doses, and had borne it well until symptoms of disturbance set in, these being great constipation, dark brown urine, slow, or in some cases rapid but feeble pulse, discolored patches resembling purpura on the limbs, and great prostration. In the cases which ended fatally the cause of death was heart failure, with œdema of the lungs.

CHROMIC ACID IN HYPERIDROSIS PEDUM.—(*Jour. de Méd.*) In 1889 the Prussian minister of war ordered experiments to be made with pure chromic acid for the cure of sweat-foot. The results were satisfactory. A cure often resulted from a single application made in this manner: The sole of the foot and the space between the toes were bandaged after applying a layer of absorbent cotton soaked in a five per cent. solution of chromic acid. The parts thus treated became hard and dry, and the comfort of marching was much increased thereby. If there are lesions of the foot, it is best not to begin the treatment with chromic acid until these are cured. There are no evil after-effects, and of course no ill effects from the suppression of perspiration.

TREATMENT OF CONDYLOMATA may be summed up as follows, *Internat. Jour. of Surg.*:

1. Many disappear when kept dry by the application of powders, the best being either calomel or boracic acid.

2. In some cases an astringent, such as tannic acid, will effect a cure; but many cases require more radical measures.

3. In the more severe cases, all treatment should have as its object the destruction of the base of the growth. In ordinary cases, electrolysis is the best treatment. In very severe cases, the galvano-cautery is the very best treatment, as there is no hæmorrhage, and little pain. The Paquelin cautery and escharotics almost invariably leave a painful wound, confining patient to bed.

4. After removing condylomata, the condition that caused them should be treated, otherwise they are apt to re-develop.

TREATMENT OF RHUS POISONING WITH IPECAC.—Dr. W. S. Gilmore, of Sorgho, Ky. (*Country Doctor*) recommends the following with confidence, having used it for six years without a failure:

R—Ipecac. pulv., ... ʒ iij
Aquæ, ... O j.

M. Sig.—Apply freely to the affected part every two hours.

The heat, itching and pain are relieved as if by magic, and in the great majority of cases two or three applications are sufficient to produce a cure. The only difficulty that has been noticed is a slight cooking or blistering of the skin when the solution was too strong. That, however, is easily obviated, as the weaker solutions seem as efficient as the stronger. He thinks it as near a specific as we have in medicine.

SALICYLIC ACID FOR THE PREVENTION OF SCARLET FEVER.—Sticker reports the observations of G. de Rosa (*Centralblatt f. klin. Med.*) who administered salicylic acid, in doses of one to five grains daily, to sixty-six children exposed to infection during an epidemic of scarlet fever. Twenty-seven cases of the disease existed in the building, when administration of the drug was commenced. Only three of the sixty-six contracted the disease, the failure in these being ascribed to a longer exposure to infection.

DIPHTHERITIC MEMBRANE. — Caldwell recommends the following solution for dissolving diphtheritic membranes (*Med. News*):

R—Papain, ... ʒ ijss.
Hydronaphthol, ... gr. ij.
Acid muriatic, ... gtt. xv.
Aq. destillat, ... ʒ iij.
Glycerini, ... ʒ ij.—M.

Sig.—Apply to the affected part every half hour by means of an atomizer.

TREATMENT OF CHRONIC RHEUMATISM.—The following prescription is recommended in the treatment of chronic rheumatism, by Fothergill, *Méd. Prog.*:

℞—Arsenious acid, ... 1.20 grammes.
Powdered guaiac., . . . 12 "
Pulverized capsicum, . . 2 "
Aloes and myrrh, . . . 12 "

Make 120 pills. A pill to be given three times a day, together with a diet rich in fatty substances.

FOR CHILBLAINS.—Dr. Price A. Morrow says (*Jour. of Am. Med. Assoc.*) that the following is very useful:

℞.—Acidi carbolici, ... ʒ j.
Tincture iodinii, ... f ʒ j.
Acidi tannici, ... ʒ j.
Cerat, simplicis, ... ʒ iv.

Misce bene ut ft. ungt.

Sig.:—Apply two or three times a day.

CHRONIC GONORRHŒA.—Dr. Roicki (*Deut. Med. Woch.*) recommends injections of ergotine in chronic gonorrhœa, as a promply acting remedy. They are borne very comfortably by the patient. He prescribes it in the following formula:

℞—Ergotine, ... gr. vj.
Aq. dest., ... ʒ x.—M.

Sig.—Three to six injections daily.

ULCER OF STOMACH.—Dr. Kohl (*Weekly Med. Review*) gives the following method of diagnosing ulceration of the stomach: If ulceration is suspected, direct the patient to eat some finely chopped onion, when, if it exists, a burning sensation will be produced, as if caustic had been applied.

DIABETES.—Dr. Kohl, of Belleville, Illinois (*Med. Review*), has used bromide of arsenic in a number of cases of diabetes, and is fully convinced that it is the most valuable remedy we have for this disease. Used in connection with the dietary treatment of gluten flour he has had good results.

DR. CHARLES W. DULLES has retired from the editorship of the *Medical and Surgical Reporter*. Under his management the journal was most successfully conducted. We are sure that the Dr. has the best wishes of all of those of us who are still in harness. He has been succeeded by Edward T. Reichert, M.D., to whom we wish an equal measure of success.

Books and Pamphlets.

SURGERY: A Practical Treatise with Special Reference to Treatment. By C. W. Mansell Moullin, M.A., M.D., Oxon.; Fellow of the Royal College of Surgeons; Surgeon and Lecturer on Physiology to the London Hospital; formerly Radcliffe Travelling Fellow of Pembroke College, Oxford, England: assisted by various writers on special subjects, with five hundred illustrations. Philadelphia: P. Blackiston, Son & Co.

The object of the author is evidently to make this, one of the most recent contributions to the literature of surgery, as practically helpful as possible to students and general practitioners. Hence he has largely avoided controversial materials, strictly confining himself to principles of Pathology which are thoroughly established, and has devoted a generous proportion of his book to the question of Treatment.

Part I. is devoted to General Pathology of Surgical Diseases; Part II. to General Pathology of Injuries, and Part III. to Diseases and Injuries of Special Structures.

The chapters on Injuries and Diseases of Bones and Joints, Injuries and Diseases of Lymphatics, and Injuries and Diseases of the Abdomen, are particularly pleasing to the student. A special feature of the work is the unusually large number of wood cuts which adorn its pages.

Altogether, though there is little of novelty introduced, the subject is presented in a terse, yet comprehensive, manner, which will no doubt render this work very acceptable to those for whom it is more particularly written.

Several printer's errors and a few omissions in the Index will no doubt be corrected in a future edition.

ESSENTIALS OF SURGERY, Arranged in the form of Questions and Answers. By Edward Merlin, A.M., M.D., Instructor in Surgery, University of Pennsylvania; Surgeon to the Howard Hospital, etc. Illustrated. Philadelphia: W. B. Saunders. Toronto: Carveth & Co.

This is a double number, and a good one. It contains much useful information, which is with difficulty obtained from the standard works on Surgery, such as descriptions of bandaging, directions and prescriptions for the various materials used in antiseptic surgery, together with a large number of formulæ for the medical treatment of surgical affections. We can recommend it to students.

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IS EARLY RESECTION OR CONSERVATIVE TREATMENT ADVISABLE IN COXITIS?*

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While our increased knowledge of the pathology of tuberculous joint affections has resulted, in most joints, in earlier operations in order to remove the local focus before the joint has become totally disorganized, the same cannot properly be said about tuberculous affections of the hip-joint. We still find the same disagreement between the adherents of conservative and operative treatment, and I scarcely say too much when I state that in the vast majority of cases excision is still made as *ultimum refugium* only. Yet even in these cases a better knowledge of the pathology and consequently improved operative methods have been followed by decreased mortality and improved functional results. In order to decide the question, it seems proper shortly to study the pathology of coxitis. We formerly believed that tuberculous affections of the hip, or for that matter of any other joint, commenced as diffuse inflammations, which went on to destruction of the joint. *Post-mortem* examinations were rare, except in cases which represented the later stages of coxitis. In these the synovial membrane was always found diffusely diseased, the ligaments and the perisynovial tissue changed to gelatinous, œdematous or fibrous tissue, the joint itself filled with fungus granulations, the cartilages generally ulcerated and shed, leaving the epiphyses in a state of softening and caries. But often we found the cartilages more or less intact and we therefore believed that the synovitis was the primary lesion, the disease of bones and cartilages secondary. The tuberculous bacillus was unknown and we supposed a dyscrasia present. Furthermore, all acute infectious diseases were known to be followed occasionally by inflammations of the joints, which always commenced as a synovitis, as in pyæmia, puerperal fever, typhus, scarlet fever, etc. It was acknowledged that the inflammation occasionally might commence in the bone, but it was believed that it even then commenced as diffuse inflammation of the medullary tissue in the epiphyses.

We overlooked that these diffuse processes, whether in bone or in synovial membranes, were secondary and were the result partly of an infection, partly of reactive and reparative processes.

It is the Germans, particularly the late Prof. Volkmann and Prof. Koenig, both of whom I quote extensively in this paper, to whom belongs the credit of proving that the fungous or tuberculous joint affections commence, in the majority of cases, as a local focus in the bone and that the consecutive entrance into the joints of the *materia morbi* from the local focus produces the diffuse inflammation of the synovial membranes and the epiphyses. That the disease, in a few cases, may commence as a synovitis is not denied and is occasionally proved by *post-mortem* examination.

This is by no means a generally accepted theory. Haberern, for instance, states that in 132 cases of excision a primary osseous lesion was present 80 times, 23 times a primary synovial affection, while the starting point was doubtful in 23 cases. Watson Cheyne thinks the disease more often primarily osseous, although not in the proportion Haberern states. The trouble is that only in early cases can the presence of a local focus be shown. In late cases we find exactly the same changes in bone and joint, whether the disease started as an osseous or synovial inflammation.

It is therefore probably true that the vast majority of cases commence, as Volkmann says, as an osteitis and not as an arthritis, and more particularly as a circumscribed cheesy or tuberculous osteitis or osteomyelitis.

It depends upon circumstances whether the joint later becomes attacked: viz., whether the products of the inflammation perforate into the joint, as usually, from anatomical reasons, occurs, or seek the surface. The primary focus, at least

* Read before the Ontario Med. Association, June, 1891.

in childhood, is always in the bone, either central or near the peritoneum. Generally only one focus is present and it is rarely the case that both epiphyses are attacked simultaneously.

The focus is generally small, as large as a cherry-pit, or at most as a nut. The neck is the point of predilection in the near neighborhood of the epiphyseal cartilage, or in the diaphysis, or trochanter major, while the head is rarely the starting point. The focus may perforate the epiphyseal cartilage in order to invade the epiphysis. It may even commence as a chronic osteomyelitis in the cavity of the femur and work its way upwards. Primary attacks of the acetabulum are probaby more frequent than generally believed. Haberern states, that in his 80 cases the acetabulum was attacked alone in 50 cases, the femur alone in 23 cases and both together in 7 cases.

The focus presents itself as a little cavity filled with cheesy granulations and bone detritus and frequently a sequestrum, and surrounded with a pyogenic tuberculous membrane. Sequestra were present 51 times in Haberern's 80 cases, soft caseous deposits 29 times. If the focus perforates into the joint, tuberculous synovitis occurs with very acute symptoms. If the focus is in the neck or trochanter major, the joint occasionally escapes, the osteitis and abscesses being extra capsular.

While the osteitic process is going on in the neck and before perforation takes place, we may discover changes in the joint itself. The synovial membrane, the periosteum and the periarticular tissue become more or less infiltrated and œdematous, slight exudation may occur and a partial obliteration of the joint may take place; little by little the whole synovial membrane may be changed into a granulation tissue, and yet we have no tuberculous arthritis. When at last the peforation occurs, it is into a half obliterated joint, and the symptoms are therefore proportionately less; as a joint reacts the more severely to infectious products when the synovial membrane is physiologically intact, and the less severely the more the synovial membrane has been changed into a granulation tissue. This partial obliteration we meet particularly in the knee-joint, but less often in the hip-joint, where we consequently are more apt to meet acute suppurative arthritis. Yet even here we occasionally see a central necrosis of the head and neck being followed by an obliteration of the joint, and thereafter destruction of the epiphyseal cartilage and diastasis of the head, which meanwhile has become firmly attached to the acetabulum. As a rule, the hip-joint is attacked early, as the whole neck, in which the local focus generally is found, is inside the synovial capsule, but we may see the joint escape even when the focus starts as a central necrosis in the head or neck. A carious fistula may then be found perforating outward through the trochanter major. This point is of importance as indicating the way in which such a central necrosis may occasionally be attacked, through trephining of the trochanter and the neck, or by ignipuncture.

The perforation of the tuberculous local focus having occurred into the healthy or half obliterated joint, further pathological changes take place, while at the same time the symptoms of coxitis, which so far have been vague and insignificant, become pronounced on account of the implication of the synovial membrane, the cartilages and adjacent Haversian canals. The characteristic symptoms are particularly the starting pains and the muscular contractions, both indicating osteitis in the neighborhood of the joint cartilages, while the position of the limb (adduction, flexion and rotation) is less characteristic, probably depending upon other causes.

The pathological changes are those of a tuberculous synovitis, with its resulting destructive processes.

The round ligament, which is covered with synovial membrane, is early attacked and softened, and then disappears.

The osteitic process generally commences at the place of insertion of the round ligament to the head and acetabulum, and on the neck at the place where the synovial membrane is attached. The cartilages become ulcerated by pressure of the granulations (Volkmann's ulcerative decubitus), or shed by pressure of the granulation-tissue, meanwhile developed in the dilated Haversian canals. The bones are now in a state of osteo-porosis; the head loses its roundness and becomes smaller from pressure, just as the acetabulum enlarges by pressure upwards and backwards, or becomes perforated by gradually developed decubitus, and spontaneous dislocations and intra-pelvic abscesses result. Periarticular abscesses are rarely the result of the breaking down of granulation-tissue in the peri-

articular tissue. They occur usually from softening and perforation of the capsule itself. So much in regard to the pathology. Yet I wish at this stage to show a pathological specimen which to the fullest illustrates the pathological process as here described. The patient is a little girl ten years of age, who entered the Sisters' Hospital in Buffalo in March, 1891. She had then been sick only two weeks, and a physician had opened up an abscess on the outer side of the right femur. Contra-openings were made in the hospital and the abscess found to be situated beneath the vastus muscles, but apparently not connected with the hip-joint which seemed healthy. Two weeks after entering the hospital she grew worse and offered the usual symptoms of coxitis. Under chloroform, the joint was examined and a carious process found on the upper side of the neck. A good sized abscess was found in the pelvis and opened. As this abscess was supposed to indicate perforation of the acetabulum, I removed the head and neck, which I here show. You see a local focus in the neck which had opened into the joint, the synovial membrane of which was found thickened and tuberculous. The round ligament had disappeared and at its place a carious process is going on. The cartilages are yet healthy. I suppose the carious process on the upper surface of the neck gave occasion to the first abscess, and that the tuberculous focus perforating into the joint produced the acute symptoms of coxitis. In this case the excision was performed about four weeks after the beginning of the disease.

In another case, operated at the same time, the disease had lasted two months. I found there a sequestrum in the neck, three-quarters of an inch long, a perforation into the joint, shedding of the cartilages, osteitis of the epiphysis, diastasis of the epiphyseal cartilage and tuberculous synovitis. In both cases the operation cut short the disease, the wounds healed rapidly and the final result will be what I have always obtained: a movable joint with some shortening, which is easily overcome by aid of a thick sole. I consider this specimen of peculiar value, as showing the condition in the early stage. In later resections, in which we find diffuse osteitic processes of head, neck and trochanter major, destruction of cartilages and tuberculous degeneration of the synovial membrane, it is impossible to find the local focus, as everything is diseased, but that does not prove that it was not present in the start.

Coxitis may, under favorable conditions, terminate in recovery in any stage, of course with more or less deformity; and the usefulness of the limb depends upon the amount of flexion and adduction. A perfect recovery with normal joint is rarely obtained. I myself remember only one case. And with what cost is this imperfect recovery with a more or less deformed limb obtained? It means years of suffering and treatment, be that with extension in bed or with a portable apparatus, frequent operations for abscesses with resulting fistulas, the dangers of amyloid degenerations of liver and kidneys, and of tuberculous meningitis, and, lastly, of an excision as *ultimum refugium* at a time when neither the broken-down constitution of the patient nor the extensive destructive processes in head, neck and shaft favor reparative processes. In those cases in which we do not have an abscess, the tuberculous focus has probably become incapsulated, surrounded with a zone of sclerotic bone tissue, and the synovial membrane is not tuberculous, although the joint may be partially or totally obliterated. In these cases conservative treatment is probably indicated. But if abscess is present, it shows that perforation has occurred, and, in my opinion, an early operation is the only thing that can arrest the disease.

And yet, why wait for abscess? The tuberculous bacillus, as is well known, is not a pyogenic bacillus, and may, under favorable circumstances, continue to grow and infiltrate surrounding or more distant tissues. If abscess occurs, the pyogenic bacteriæ, particularly the staphylococcus pyogenes aureus, will always be found present as the cause of the suppuration. The chronic pathological process has only become complicated by the acute suppuration, and the tuberculous process keeps on advancing simultaneously with the suppuration.

It must not be forgotten that the statistics of resection must be compared with the statistics of those conservatively treated cases, in which abscesses were present. In both classes we find a great decrease in mortality in our time.

Leiszink, for instance, gives a mortality of 63 per cent. after resection, of which 22 per cent. succumbed to wound complications; 21 per cent. to marasmus; 11 per cent. to phthisis; 7.5 per

cent. to anyloid degeneration, etc. A more recent English statistic of 320 cases showed a mortality of 40 per cent. Jacobson has increased Leiszink's statistics of 176 cases to 250 cases, and finds a mortality of 40 per cent. The result of conservative treatment was even worse. Of 63 conservatively treated cases in Copenhagen, 73 per cent. died, and 27 per cent. recovered. An English statistic of 384 conservatively treated cases, in all of which abscesses were present, showed a mortality of 67 per cent., a recovery of 33 per cent.

If abscess was not present, 69 per cent. recovered. Grosch (1882) found a mortality of 28 per cent. under antiseptic treatment.

Koenig states in a recent work, that it is an exception that a patient dies after resection of acute or chronic sepsis. In spite of the decreased mortality following resection, surgeons still differ in regard to the advisability of conservative or operative treatment. Two English surgeons of large experience, Marsh and Wright, represent well the different opinions. Marsh is strictly conservative, and considers excision uncalled for. Continued rest, he says, gives a mortality of only 5 per cent., and 70 per cent. recover, with slight lameness and loss of motion. Even when suppuration has occurred he gives a mortality of only 6 and 8 per cent.

Dr. Wright, on the other hand, with an experience of more than one hundred cases of excision, of which only three died as a result of the operation, strongly advocates excision as soon as external abscesses occur, yes, even before the capsule has been perforated. He maintains that excision cuts short the disease, saves pain, lessens time of treatment, and gives a better functional result. Osteomyelitis once established, nothing short of excision can, in his opinion, prevent the progress. Nature can, of course, get rid of the caries and necrosis, but the children who can survive the elimination are few, except among the well to do. The decreased mortality and the better functional result are the result of our increased knowledge of pathology and improved operative methods. Formerly we simply excised the head and perhaps neck and trochanter, but we left the tuberculous synovial membrane and discredited the operation, because, as might be expected, suppuration continued or increased, and our patients died of marasmus, amyloid degenerations, tuberculous meningitis or phthisis. Modern pathology has taught us that coxitis is primarily an osteitis, secondarily a tuberculous synovitis and arthritis, and that it is necessary not only to remove the bone affection, as we formerly did, but to remove the tuberculous synovial membrane just as well. If anything is left of that, relapse is sure to occur. The same is true about the tuberculous pyogenic membrane covering an abscess. If all diseased tissue of bone and synovial membrane is removed, we may get healing of the wound by first intention even, just as we see it in operations on the knee-joint. I am even inclined to go a step farther than Wright, and advocate still earlier operation in order to remove the local focus before diffuse inflammation of bone and joint has occurred. I tried this shortly ago in the case of a little girl, who had been sick six weeks and who had considerable infiltration around the neck. I made an anterior incision (Barker's) between the sartorius and tensor vaginæ femoris muscles and exposed the neck with ease, the extensor quadriceps femoris being pulled inwards. I found under this muscle a great mass of tuberculous material, which had not yet broken down into pus, and removed it, but I could not find the local focus, although by flexing the hip-joint I could examine the whole lower surface of the neck. I closed the wound with sutures and it healed by first intention. She did not improve, and three weeks after I resected the joint, found a sequestrum 3·4 inch long near trochanter and a completely disorganized joint, diastasis of the epiphyseal cartilage, etc. The patient left the hospital recovered in three weeks. I show you the preparation here.

Mr. W. H. Battle reports a similar case in the London Clinical Society. He successfully removed the local focus, washed out the joint, and the child recovered in four weeks.

If the disease commences in the acetabulum (and according to Haberern this should occur in 5 out of 8 cases) operation would be still more indicated as the dangerous complication of intra pelvic abscess is apt to follow. This complication has formerly been considered an absolute indication for resection, but Bardenhener, of Cologne, has several times resected the acetabulum in such cases, by aid of his symphyseal incision (extraperitoneale explorations-schnitt). But even if it is possible, yes, comparatively easy, to resect the

acetabulum in this way, we are forced to leave behind the tuberculous synovial membrane, and the secondarily affected head and neck of the femur, and the disease, I judge, would proceed in spite of this operation.

Still one question remains, whether the limb is better after excision or after conservative treatment?

Holmes thinks that shortening is generally greater after excision and the limb less firm and less useful. Motion is more frequently present and more extensive, but the patients walk more insecurely and with more limp. Jacobson thinks the average results obtained by conservative treatment superior to those following excision, particularly in adults, where we often get flail-joints after excision.

Wright, with his large experience, thinks that excision gives better results and that much shortening depends upon using the limb too early.

It is evident that the best result following excision cannot compare with the best result following conservative treatment: *restitutio ad integrum*. We must compare those conservatively treated cases, who have got well in spite of abscesses, caries and years of suffering, with those, in which, for the same reasons, excision was made. Few get well by conservative treatment, extending during years, without considerable flexion and adduction. To treat such a case demands such continual patience from both the parents, the patient and the surgeon, that a good functional result is almost out of the question unless the patient be treated in a hospital, where the surgeon has complete control over the patient and the nurses. It might, therefore, more properly be asked, whether a flexed and adducted limb is more useful than a shortened limb after resection?

Judging from my own limited experien I believe that excision gives a better functional result and a better looking leg than does conservative treatment in the majority of cases, particularly if you can sever the bone above the trochanter minor. If you are forced to go below the trochanter minor you are very apt to get a flail joint. In early, or comparatively early operations, the disease will probably always be found confined to the head and neck.

I have, during the last few years, resected the hip-joint ten times, eight of which recovered with good and useful limbs; two died of other causes, independent of the operation.

The earlier the operation has been done, the better has the functional result been and the quicker the recovery. The last two cases, the pathological specimens of whom I have shown here, left the hospital with healed wounds in three or four weeks, but have, of course, not yet been allowed to use their resected limbs. Most of the cases presented themselves in the third stage of coxitis with extensive carious destruction, large abscesses and broken down constitutions. Yet even these cases, which had been treated conservatively for a long time, were, by prompt excision, restored to health and comfort, and provided with a firm and useful limb.

FATTY TUMORS IN THE INGUINAL CANAL.*

BY A. PRIMROSE, M.B., C.M., EDIN., M.R.C.S., ENG.,

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A group of fatty tumors has been described as occurring at the groin, in the inguinal canal, and in the scrotum, situated beneath the deep fascia of the neighborhood and devoid of any peritoneal covering. The mode of origin of these tumors has been the subject of considerable discussion, and on more than one occasion it has been suggested that they were developed from the extra-peritoneal fat. That layer of fatty tissue lying outside the peritoneum bears much the same relation to the serous membrane as the subcutaneous fat bears to the skin. We often find fatty tumors developing in the subcutaneous tissue, and we are not surprised to meet with similar growths occurring in the subserous fat; they are certainly not so common in the latter situation as they are in the former. When the appendices epiploicæ are much enlarged and form tumors of considerable size, we have in them a good example of subserous lipomata. Bland-Sutton* figures clusters of pedunculated fatty fringes occurring along the colon, to which he has applied the term "Lipoma Arborescens." Another specimen

* Read before the Ontario Med. Association, June, 1891.

* *British Medical Journal*, vol. I, 1890, pp. 878, 879.

of a pendulous lipoma of the colon is also described in the same paper.

It appears that some cases of so-called ventral herniæ are not true herniæ. In a true ventral hernia we have some of the abdominal contents protruding through the anterior portion of the belly wall, it may be through the linea alba or the rectus muscle. It is the form of ventral hernia described as omental which is occasionally the source of error. A case illustrating this came under my care last year; a man 26 years of age, a laborer, was admitted into the Toronto General Hospital, complaining of pain in the epigastrium. He had a small swelling about an inch and a-half in diameter, the centre of which was in the middle line three inches below the zyphi-sternal articulation. The bulk of the tumor could be diminished considerably on manipulation, one could not detect any impulse on coughing. The patient had some digestive trouble, vomiting occasionally after meals and complaining of nausea and some pain in the abdomen; the bowels were constipated. The diagnosis of ventral hernia was made and an operation performed. Immediately beneath the deep fascia was found a soft lobulated mass of fat about the size of a hazel nut, a distinct pedicle from this passed through the linea alba. A ligature was applied at the base of the pedicle and the fat tumor removed; another but smaller piece of fat with similar connections was dealt with in the same manner; deep sutures were introduced and the wound closed with a few superficial stitches. This tumor was situated immediately under the deep fascia and there was no serous sac covering it; there was an excessively thin capsule, from which septa passed between the lobules; the tumor was no doubt connected by its pedicle with the sub-peritoneal layer of fatty tissue and had passed out through the linea alba; it was therefore not omental, but sub-peritoneal fat. The man's digestive derangement was not affected by the operation.

These cases, then, occurring either in connection with the visceral peritoneum—as in the cases referred to of lipoma connected with the colon—or in connection with the parietal peritoneum, as in some cases erroneously described as ventral herniæ, illustrate the fact that lipomata occasionally develop from the sub-peritoneal fat, and we have therefore suggested to us a possible source for the development of certain fatty tumors occurring in the inguinal region, that group of lipomata which forms the subject of my paper.

My attention was drawn to the subject by the examination of the specimen which I now show you; it was found in an adult male subject in the dissecting room of the University of Toronto and was exhibited to me by a student who took it to be an inguinal hernia. During the dissection of the left spermatic cord, a piece of fat about the size of a walnut was found lying within the coverings of the cord, and in front of the constituents of the cord; this I examined carefully, and on failing to find any peritoneal sac, I investigated further by opening up the abdomen in the middle line and dividing the whole thickness of the wall transversely at the level of the umbilicus. I then examined carefully the inguinal pouches from within, and the structures lying in contact therewith. The omentum was lying free, as were also the intestines, and there was no protrusion whatever of the peritoneum through the internal ring or in its neighborhood. I then carefully dissected off the parietal peritoneum and found that there was no hernial sac engaged in the inguinal canal. Having thus stripped off the peritoneum entirely, the fatty tumor in the inguinal canal was still undisturbed, and I noted the following condition. The fatty tumor protruding at the external ring was attached to a long pedicle which lay in the inguinal canal, the pedicle passed through the entire length of the canal and was continuous with the sub-peritoneal layer of fatty tissue within the abdomen in the region of the internal ring and the deep epigastric artery. It at once occurred to me that the specimen was a valuable one, on account of the possible sources of error in diagnosing such a condition during life.

There are two difficulties which might be encountered in dealing with such a condition during life. 1. The fatty tumor might be mistaken for an omental hernia, and, 2, a true hernia might exist along with the tumor and might be overlooked. The latter difficulty is the more important, as an error in diagnosis might lead to serious consequences. Professor Annandale* records the case of a fatty tumor the size of an orange, which was clearly not omental, occurring in the femoral region; during an operation for its removal the fat was carefully examined and separated, and embed-

* *Edin. Med. Jour.*, March, 1870.

ded in its midst was found a small femoral hernia contained within its peritoneal covering. He records more than one case of a similar character, and speaks of the danger in dealing with such a condition; the possibility that the operator, whilst not recognizing the true condition of affairs, might be tempted to excise the tumor without reducing the hernia, thereby opening up the peritoneal cavity and possibly wounding the gut or omentum.

These cases recorded by Prof. Annandale were in the femoral region, where, in the neighborhood of the crural ring, the sub-peritoneal fat is usually well developed, it might easily occur also in the inguinal region the sub-peritoneal fat in extending downwards in the canal might tend to the protrusion of a peritoneal pouch into which a hernia might descend. Prof. Annandale, however, did not attribute the source of these fatty tumors to the sub-peritoneal fat, there was no proof at the time when his cases were recorded that such lipomata were developed from such a source. The possibility, therefore, of a hernia, accompanying a fatty tumor devoid of serous covering, should always be borne in mind in operating on lipomata in hernial regions. In distinguishing such tumors from omental hernia there is a possible source of error in mistaking the capsule of the lipoma for a serous sac, this is the more likely to occur when, as sometimes happens, the capsule is thickened and resembles to a considerable degree a peritoneal covering. The smooth glistening surface of the peritoneum would appear on opening a true hernial sac, and then again the capsule of a fatty tumor has, as a rule, septa which pass in between the lobules. By keeping these points in view one can generally distinguish between a tumor capsule and a peritoneal sac.

The fact that such tumors as I have described originate in the sub-peritoneal fat is not generally recognized. Sir James Paget suggested this view and it is put forward by Jonathan Hutchison, Junior,* in a paper read before the Pathological Society of London. I cannot, however, find any reference to it in the English text books on surgery which I have consulted. The tumor which I have dissected and described proves conclusively the possibility of the occurrence of such tumors and their source; and the case of ventral so-called hernia which I have narrated suggests that they may be looked for in other hernial regions as well as in the inguinal canal.

I need only but refer to the other fatty tumors which are found in the inguinal region. Omental hernise are common. Last year I narrated before the Toronto Medical Society the history of a case of imperfect transition of the testis operated on by Dr. Cameron. In that patient we found an omental hernia lying above the testicle in its own peritoneal sac. The omental mass was the size of a duck's egg, and was almost exclusively confined to the inguinal canal, the walls of which were expanded over it. Then again there are occasionally, but rarely found, tumors in the region of the canal, although not within the coverings of the cord, developed from the subcutaneous fat and extending down towards the scrotum. An interesting case of this kind is reported by Henry Gray,* in which the fatty growth continued downwards and was continuous with the dartos tissue of the scrotum. These tumors, however, lie outside the inguinal canal, and therefore can hardly be included in the group indicated by the title of my paper.

It is an accepted fact that fatty tumors are only found in situations where fat is normally developed in the body, and that they originate from the pre-existing adipose tissue. The possible sources of such growths occurring in the inguinal region, therefore, are first, those found within the coverings of the cord, their source being either (*a*) omental or (*b*) from subserous fat; and secondly, those lying outside the coverings of the cord developed from the subcutaneous fatty tissue.

Path. Soc. Trans., Vol. XXXVII, p. 451.

Reports of Societies.

GYNÆCOLOGICAL AND OBSTETRICAL SOCIETY OF BALTIMORE.

APRIL MEETING.

The President, Dr. Henry M. Wilson, in the chair.

Dr. Wm. P. Chunn related a case of ascites, which he treated by tapping and permanent drainage with apparently good results.

Dr. B. B. Browne, more operated than a year ago upon a woman with ascites, who also had an

Path. Soc. Trans., Vol. V., p. 230.

abdominal tumor which proved to be papillomatous.

There has been no return of either the dropsy or the papillomatous growth. He referred to the many cases of laparotomy and washing out the abdominal cavity.

Dr. Geo. W. Miltenberger could not see why any malignant tumor should not be able by irritation of the serous membrane to cause ascites. We often see ascites without any definable cause, and when a growth did exist it seemed a very good reason for the presence of the fluid. He referred to the case of a colored woman operated upon by Dr. Neale.

Dr. L. E. Neale said that in the case of the colored woman referred to, there was no assignable cause for the ascites except the presence of a subserous uterine fœtus myomata; at the operation he removed the uterine appendages. The growth remained, but there was no return of the ascites. There was also a complete procedentia, but after the operation he was enabled to keep the uterus in place with a soft rubber ring. The tumor gradually diminished and ultimately disappeared.

Is the exposure and irritation of the serous membrane, during the operation, a sufficient explanation of such an alteration in its function when the apparent cause of the ascitic extension remains?

He thought the question eminently important and practical in its bearings, and that it required further elucidation.

Dr. Wilmer Brinton remarked that in a case of cirrhosis of the liver in a male patient, tapping for the ascites had been followed by a permanent opening which persisted until the patient's death, one month afterwards.

Dr. J. Whitridge Williams, in referring to Dr. Moseby's remarks said that the ascites accompanying papillamatous growths was considered to be due in great part to direct exudation from the vessels of the growth—he also referred to tubercular peritonitis.

Dr. B. B. Browne exhibited a small tumor about the size of a large hickory nut, and apparently a fibroid which he had removed from a point a little to one side of the median line, and between the clitoris and urethra. It pressed on the urethra interfering with micturation. The growth was easily shelled out, and the patient did perfectly well. It was the first growth of the sort that he had seen in that locality.

Dr. Neale related a case of imperforate rectum in a white male child naturally borne at full term of healthy parents. The child was puny, weighing only 5¾ pounds at birth, and one inch within the anus the rectum was imperforate. Dr. T. Hanny operated upon the child when it was two and a half days old, very feeble and partly cyanosed. No anesthetic was used, anus was cut through, the perineal structures laid open, the coccyx removed, the rectum opened through its posterior wall just above the imperforate part, and its mucous membrane stitched to the skin just behind the original anal aperture. The stitches sloughed out and the large wound healed slowly by granulation. A copious discharge of flatus and meconium occurred during the operation, and the tympanitic abdomen disappeared.

Profound shock and collapse followed the operation, the child lying motionless, the feet and lower limbs cyanosed, the face and head less so—jaw dropped, mouth opened, eyes closed, lids blue, surface temperature but little if at all lowered. No cry. The features were frequently pinched or wrinkled from pain, becoming more or less blue at irregular intervals.

In this condition the child would make no effort at suction, but would swallow two teaspoonfuls at a time of milk and brandy when poured into its mouth, rarely refusing to swallow and never vomiting the food and stimulus which were given freely and frequently. For nearly two days and a half did it remain in this state—partially rousing during the administration of food or other disturbance, and again relapsing. Even after this period, when the first decided improvement occurred, the child would frequently relapse and remain in this condition for hours at a time. The first two weeks of its life were passed in this manner. The digestive and urinary apparatus functioned normally.

From the tenth to the fourteenth day these attacks gradually diminished and ultimately disappeared. The child is nearly two months old, but very feeble, and weighs only 5¼ pounds. It has been reared chiefly on condensed milk. The dense cicatrice just about the seat of the old imperforation has to be dilated daily with the finger; another operation will be necessary. No diagnosis of abnormality in vascular system could be made.

Dr. Brinton mentioned a case of a child which lived nine or ten days with an open ductus anteriosus.

Dr. Miltenberger said that in Dr Neale's case the sphincter and anus were perfect. On introducing his finger to the end of the cul de sac he felt what appeared to him the end of the coccyx.

He thought that no cardiac trouble could account for the symptoms in the case. The cyanosis would not clear up entirely and then recur. He did not consider the condition one of collapse. There was no feeblenses of pulse or coldness of surface. The child would lie in an apparently comatose condition, with no evidence of sensation, and then recover. The first attack followed immediately the operation, and evidently from shock; but after two or three days it could not be attributed to this cause. There was no chill or febrile condition.

After the child had commenced taking food he used quinine by inunction and also small doses of dyalized iron, and as he believes with benefit from the latter.

He was inclined to account for the condition in this way :—A very feeble child had food forced upon it for eight or ten hours, and when it had taken in all it could it apparently fell into a condition similar to that of hybernating animals, and when the supply of food was exhausted it would recover and take more nourishment. This condition entirely disappeared after the first two weeks.

THE ONTARIO MEDICAL ASSOCIATION.

This Association met on the morning of June 3rd, Dr. Moorhouse, of London, in the chair. The minutes of last meeting were read and approved; and the President called upon delegates from the United States to seats upon the platform which call was responded to by Dr. Senn, of Chicago; Dr. Carman, of Buffalo; Dr. Meikle, of Buffalo; Dr Howard Kelly, of Baltimore; Dr. Mynter, of Buffalo. After a few remarks by these gentlemen, Dr. Teskey was called upon to read the address on Surgery. The subject of the address was "Carcinoma." Dr. Teskey dwelt upon irritation as a cause of carcinoma believing that in many cases inflammatory products, at first simple in character, by prolonged irritation took on malignant action, and adjacent lymphatic glands became involved, and the tumor ultimately passing in character into a malignant one. He believed it quite possible for the changed character which the epithelial cells possess in epithelioma to be induced by simple irritation, and cited examinations of doubtful growths wherein many cells possessed malignant characters, whilst others were perfectly normal. He also spoke of the tendency in some cases to natural cure by sloughing, and cited a case of cancer of the breast where a suppurative process appeared to arrest the growth and development of a tumor, which, to all appearances, was cancerous. He had had the same under observation for seven years, and so far there was no evidence of the return of the malignant action which at first characterized the growth.

Dr. Senn, of Chicago, took part in the discussion, and dwelt upon the theory of Conheim, that embryonic elements remaining among the tissues accounted for the origin of the carcinoma. For himself he did not believe that irritation alone could cause carcinoma, and drew attention to the a change to the character of epithelium.
liability to such growth at seats where there was

Dr. Groves, Fergus, followed; he also doubted the influence of irritation causing such growth, and thought pigmentation and similar changes in cell elements might operate as a predisposing cause, and drew attention to the apparent heredity of carcinoma, and its particular liability to appear at certain periods of life when irritation generally was not particularly increased.

Dr. Teskey replied.

Dr. Oldright next had a paper on Dr. Senn's method of decalcified bone-filling, with the exhibition of a case in which the treatment had been tried. (This paper will appear in a later issue.)

The Association then divided into sections.

Wednesday Afternoon.

The Association met again in general session at 2.30 p.m. The President in the chair.

Vice-Presidents Dr. J. H. Richardson and Dr. J. A. Temple were invited to take their seats upon the platform.

The President read his annual address, in the course of which he gave a *resumé* of the History of Medicine, from the time of Hippocrates to the present, touching upon the salient features of its different epochs. In his closing remarks, the Pre-

sident referred to the high standard of medical education in Ontario, which he deemed was chiefly due to the wise measures taken by the Medical Council, to whom all credit is due.

He also referred to the advance made by the Ontario Medical Library Association, and prophesied that within a very short time its shelves would contain all the books of reference of use to the profession.

The question of Club Practice was touched upon in very condemnatory terms, and the President expressed the hope that in time the sentiments of the profession against this species of practice would grow strong enough to stamp it out entirely. Any general practitioner who still persisted should be held responsible to this Association.

It was also a matter of regret that so many practitioners persisted in advertising their specialties. This was a direct vlolation of the Code of Ethics.

One more very important matter was referred to, namely, the establishment of a Medical Defence Union for the members of the Association. Such a Union would do much to prevent suits for malpractice, and would be a great assistance to the poorer members of the profession, against whom these suits were generally brought. Care would require, however, to be taken to guard such a Union from any carelessness on the part of its members. The opinions expressed by the President called forth great applause from the members of the Association.

Dr. Howard Kelly, of Johns Hopkins University, Baltimore, was introduced to the President by Dr. A. A. McDonald, of Toronto, and was invited to take a seat upon the platform.

Dr. N. Senn read a paper upon the "Surgical Treatment of Intussusception." This paper was to have been illustrated by operations upon the intestines, but owing to the absence of the necessary apparatus, the illustration of "Intestinal Anastomoses" had to be deferred to the evening session.

The Association then adjourned, and resumed business in sections.

SURGICAL SECTION.

The Surgical Section met in the main hall. Dr. F. LeM. Grasett, Toronto, was elected chairman, and Dr. A. Primrose, secretary.

Dr. A. Mynter, of Buffalo, was permitted to read his paper at this hour, on account of his necessary return to Buffalo in the evening. His paper was entitled, "Is early Resection or Conservative Treatment advisable in Coxitis?" Before this paper was discussed, Dr. Bingham, of Toronto, was asked to read his paper on "The Surgery of Tuberculosis."

Dr. Mynter opened the discussion on the paper, followed by Dr. McFarlane, Toronto, Dr. B. E. McKenzie, Toronto, Dr. Oldright, Toronto. Dr. Bingham replied.

The next paper read was short notes on "Injuries to the Skull and Epithelioma of the Larynx," by Dr. Burt, of Paris. There was no discussion.

Dr. T. K. Holmes, Chatham, followed with a paper entitled, "Appendictis," reports of fourteen cases, showing the result of surgical as compared with medical treatment. The section then adjourned.

MEDICAL SECTION.

4.45 p.m.

Dr. J. E. Eakins, of Belleville, was elected chairman, and Dr. W. B. Thistle, secretary, of the Medical Section, which was convened in the Council chamber, second floor.

The section was opened by a paper from Dr. J. E. Graham, on the "Diagnosis of Typhoid Fever." The paper was discussed by Dr. Sheard, Toronto, and Dr. McPhedran, Toronto. Dr. Graham replied.

The second paper read was one by Dr. H. Arnott, of London, "Is Alcohol a Stimulant?" In conclusion he submitted a resolution concerning the use of alcohol by the profession. Dr. J. S. King was of the opinion that the resolution should include opium. Dr. J. E. Graham pointed out that the resolution was out of order. Dr. Arnott replied.

Dr. T. Millman, Toronto, then read a paper entitled "Epileptic Insanity." The paper was discussed by Dr. Arnow and Dr. Rice. It being 6 o'clock, the section then adjourned.

WEDNESDAY EVENING, GENERAL SESSION.

The evening session was opened at 8.30 p.m., the President in the chair.

Dr. M. Sullivan expressed his regret that he was obliged to leave for Ottawa at once, and was therefore unable to take part in the discussion of Mr. Senn's paper as he had promised. Before leaving he paid a high compliment to Dr. Senn for his service to the Science of Surgery.

Dr. Senn demonstrated his method of bringing about "Intestinal Anastomoses." A great interest was shown by the members in the different steps of the operation.

The discussion in Medicine was then opened by a paper entitled "The Cardiac Phenomena of Rheumatism," by Dr. A McPhedran, of Toronto.

In the absence of Dr. Henderson, of Kingston, and Dr. Gilles, of Teeswater, the discussion was opened by Dr. H. A. McCallum, of London, followed by Dr. Chas. Sheard, Toronto, Dr. McPhedran closed the discussion.

The ballots were here distributed for the Nomination Committee, and the members were asked to record their vote for 12 members of this Committee, there being 174 members registered at the time of taking the vote, Dr. J. D. Thorburn and

Dr. C. A. Hodgetts were appointed scrutineers, to count the ballots.

The discussion in Therapeutics was postponed owing to the absence of Dr. Saunders, of Kingston, Chairman of the special Committee.

The report of the Committee on Ethics was read by Dr. Tucker, of Orono, and was as follows: As the outcome of an investigation just completed, we recommend the addition to the Code of Ethics adopted by this Association of the following clause to be known as Section 10 of Article V.

1. No Physician or Surgeon shall perform a post-mortem on the patients of any other Physician or Surgeon, without making a reasonable effort to have the attending Physician or Surgeon, or the Physician or Surgeon whose professional reputation is likely to be influenced by the post-mortem examination, or his chosen representative present, and further if the presence of such Physician or Surgeon or his chosen representative be objected to by the friends of the deceased, the Physician or Surgeon requested to make the post-mortem shall refuse to make it, unless instructed to do so by a Coroner acting as such.

2 As the result of complaints made to this Committee regarding unprofessional conduct by the violation of Par. 3 of Sect. 1 of Article II. of the Code Ethics, relating to certain forms of advertisement, we recommend that the General Secretary be instructed to inform the offending members by letter that they are violating the Code of Ethics. governing this body, to which their names are subject, and your Committee will recommend the erasure of their names from the roll of membership of this Association at its next annual meeting unless the offending be at once discontinued. Their reinstatement to be governed by 1 Par. 2 of the Constitution.

3. Regarding the circular issued by a member of this Association and brought before this Committee, your Committee recommend that a written apology be demanded by this Association through its General Secretary for such a flagrant violation of our Code of Ethics, in default of which his name be erased from the roll of membership. Reinstatement to be governed by Article XII of the Constitution.

The adoption of this report was moved by Dr. Tucker, of Orono, seconded by Dr. Lundy, of Preston.

The report of this Committee was discussed by Dr. Ferguson, Toronto, who desired to introduce a motion condemnatory of Club Practice, and to have the report thus amended.

Dr. Ferguson's motion was ruled out of order.

Dr. Sheard, Dr. Burnham, Dr. Oldright, and Dr. Powell, Toronto, spoke in condemnatory terms of Club Practice. The report was unanimously carried.

Thursday morning, June 4th.

The Association met in sections at 9.30 a.m.

SURGICAL SECTION.

Dr. Primrose, of Toronto, opened this section with a paper entitled "Fatty Tumors in the Inguinal Canal."

Dr. Grasett followed with a paper entitled "Concerning Lithotomy." The paper was discussed by Dr. Holmes, Chatham, and Dr. Eccles, London.

The next paper read was by Dr. J. F. W. Ross, Toronto, entitled "Exploration of the Female Bladder." The paper was discussed by Dr. Grasett, Dr. Kelly, Dr. Dame, Dr. Ross, Dr. McFarlane, and Dr. Teskey, Toronto.

Owing to the absence of the other gentlemen appointed to read papers before the section at this hour, the section adjourned for ten minutes and resumed with Dr. James Ross in the chair, in the absence of Dr. Grasett, at the Committee on Nominations.

Dr. Price Brown read a paper on "Deviations of the Nasal Septum." There was no discussion.

Dr. B. E. McKenzie, Toronto, exhibited four cases illustrating the "Management of Talipes." The section then adjourned, it being 12 o'clock.

The report of the scrutineers appointed to count the ballots for the Committee on Nominations, was read by the Secretary.

The following gentlemen were declared elected: Dr. McPhedran, Chairman, Dr. Cameron, Dr Graham, Toronto, Dr. Burt, Paris, Dr. Holmes, Chatham, Drs. Sheard, Powell, A. H. Wright, and Reeve, Toronto, Dr. Eccles, London, Dr. Arnott, London, Dr. Grasett, Toronto.

The Committee to meet in Committe room "A," at 11 o'clock.

MEDICAL SECTION.

Section was called to order at 9.30 a.m.

In the absence of Dr. Eakins, Dr. McPhedran moved that Dr. Arnott, of London, take the chair.

Dr. Bruce Smith, was called upon to read the first paper, "A Narrow Prepuce and Preputial Adhesions in Childhood." The discussion was opened by Dr. Howitt, of Guelph, followed by Dr. Arnott, of London, and Dr. McWilliams. Dr. Bruce Smith replied.

Dr. Gardiner followed with a paper on "Pelvic Cellulitis." The paper was discussed by Dr. Rice, of Woodstock, Dr. Sheard, and Dr. Wright, Toronto. Dr. Gardiner replied.

Dr. A. B. Osborne, Hamilton, read a paper on "Pathological Weeping." The paper was discussed by Dr. Birkett, of Montreal, Dr. Trow, of Toronto, Dr. Hamilton, Toronto, Dr. Thorburn, Toronto. Dr. Osborne replied.

Dr. J. McWilliams, of Thamesford, read reports fo five cases of "Phlegmasin Dolens," with treatment.

Dr. Adam Wright, followed this with a paper on "Phlegmasia Dolens." The discussion was opened by Dr. Barrick, of Toronto, followed by Dr. Cronyn, of Buffalo, Dr. McWilliams, of Thamesford, and Dr. Rice, of Woodstock. Dr. Wright closed the discussion.

The report of the scrutineers for the Nomination Committee was here read by the Secretary, and the Committee requested to meet at 11 o'clock. The section then adjourned.

Thursday Afternoon, 2.30 p.m.

The Association convened in general session.

Dr. Cronyn, of Buffalo, and Dr. H. S. Birkett, Secretary of the Canada Medical Association, were here introduced by the President, and requested to take their seats upon the platform.

The report of the Nomination Committee was by Dr. McPhedran, Chairman, as follows:

President.—Dr. R. A. Reeve, Toronto.

Vice-Presidents.—Dr. F. LeM. Grasett, Toronto; Dr. A. Groves, Fergus; Dr. H. J. Saunders, Kingston; Dr. G. S. McKeough, Chatham.

General Secretary.—Dr. D. J. Gibb Wishart, Toronto.

Assistant Secretary.—Dr. F. P. Cowan, Toronto.

Treasurer.—Dr. E. J. Barrick, Toronto.

ADDITIONS TO STANDING COMMITTEES.

Credentials.—Dr. Duncan, Chatham, and Dr. Eakins, Belleville.

Public Health.—Dr. W. A. Ross, Barrie; Dr. Trimble, Queenston.

Legislation.—Dr. McKay, Ingersoll; Dr. Gilmore, West Toronto Junction.

Publication.—Dr. H. J. Saunders, Kingston; Dr. W. H. B. Aikins, Toronto.

By-Laws.—Dr. J. E. Graham, Toronto; Dr. H. A. McCallum, London.

Ethics.—Dr. Moorhouse, London; Dr. H. P. Wright, Ottawa.

The President expressed to the Association the regrets of Dr. Joseph Workman, Toronto, first President of the Association, that ill health prevented his attendance at the meeting. He assured the Association of his continued interest in its proceedings and advancement, and expressed the hope that the present meeting would be in every way a success.

A telegram was read from Dr. G. Roddick, of Montreal, regretting that the sudden and dangerous illness of Dr. Rogers prevented his attendance at the meeting.

Dr. Arnott, of London, asked the permission of the Association to move the following resolution:

"That in view of the great amount of misery, degradation and disease that has come upon our race from the use of alcohol, it is the opinion of this Association that it should be prescribed as seldom as possible and with a due sense of responsibility."

Dr. Oldright, Toronto, was willing to second the motion provided the words "compatible with the interests of the patients," were inserted after the words "as possible." Dr. Arnott agreed to the change.

Dr. Temple, Toronto, expressed himself as opposed to the proposed resolution. He deemed that the resolution implied a slur on the medical profession, as it was the practice to exercise as much care in the prescription of alcohol as that of opium.

It was moved by Dr. Sheard, seconded by Dr. Eccles, that the resolution be tabled. Carried.

Dr. Eccles, of London, opened the discussion in Obstetrics and Gynæcology by reading a paper entitled "Myoma of the Uterus."

The discussion on the paper was opened by Dr. A. MacDonald, of Toronto, Dr. J. H. Matheson, St. Marys, one of the members of this committee not being present. Dr. Eccles replied briefly.

Dr. Kelly, Baltimore, Md., read a paper entitled "Injuries of the Vaginal Outlet occasioned by Parturition," which he illustrated profusely by bromide plates and chalk drawings.

His paper was discussed by Dr. J. A. Temple, Toronto. Dr. Kelly replied briefly.

Dr. A. McPhedran, Chairman of the Committee on Nominations, moved the adoption of the report read previously in the afternoon. The motion was seconded by Dr. Sheard, Toronto. Motion was carried.

The Secretary read a communication from the Secretary of the Canada Medical Association, requesting the appointment of four delegates from this Association to the meeting of the Canada Medical Association in Montreal in September, in accordance with the terms of arrangement made by a joint Committee from the Ontario Medical Association and the Canada Medical Association last September.

It was moved by Dr. Grasett, Toronto, seconded by Dr. Sheard, Toronto, that the President be authorized to appoint four delegates to the Canada Medical Association. Carried.

SURGICAL SECTION.

The section was called to order at 4.45 p.m.

The following papers were discussed. Dr. A. E. Malloch, of Hamilton, reported a case of "Excision of the Shoulder and Elbow Joints of the same Arm for Traumatism," and exhibited the patient.

Dr. G. A. Peters, Toronto, followed with a paper on "Acute Osteomyelitis," and exhibited the cultures. Discussion was opened by Dr. N. A. Powell, Toronto. Dr. Peters closed the discussion.

MEDICAL SECTION.

The section was called to order at 4.45 p.m.

Dr. H. A. McCallum, London, was called upon

to read his paper called, "Some Points in Pathology in Kidney Diseases." The paper was discussed by Dr. A. McPhedran, and Dr. C. Sheard, Toronto. Dr. McCallum replied. The section then adjourned.

THURSDAY EVENING, GENERAL SESSION.

The Association was called to order at 8.30 p.m. The President, Dr. W. H. Moorhouse, in the chair.

The President asked the permission of the Association to change the order of business, and called upon Dr. A. Stowe Gullen, to read a paper entitled, "Medicine from a Sociological View Point." The paper was discussed by Dr. Sheard.

The discussion in Otology was opened with a paper from Dr. R. A. Reeve, entitled, "Points of General interest in Otology." The discussion was opened by Dr. A. B. Osborne, of Hamilton, followed by Dr. Moorhouse, of London, and Dr. Birkett, of Montreal. Dr. Reeve replied.

It was moved by Dr. MacDonald, seconded by Dr. Wishart, that the papers of Dr. Saunders, of Kingston, Dr. Cauldwell, of Peterboro, Dr. Greig, of Toronto, Dr. Campbell, of Seaforth, and Dr. King, Toronto, be taken as read. Carried.

Dr. G. S. Ryerson, Toronto, then read a few extracts from his paper entitled, "Bearings of Color Blindness," and in conclusion, seconded by Dr. J. E. Graham, presented the following resolution:

"Whereas the attention of the Ontario Medical Association has been called to the methods employed in examination for color blindness on Railroads, and in the Marine Service in Canada,

And whereas it is believed that the said methods are imperfect, and do not absolutely eliminate the color blind from among Railroad or Marine employees, and that serious danger arises to the travelling public from this cause,

Resolved—That the attention of the Hon. Minister of Railroads and Canals, and of the Hon. Minister of Marine and Fisheries, and the Presidents of the G. T. R. and C. P. R. and other railroads, be drawn to this fact, and that they be earnestly desired to give this important matter their most serious consideration.

And resolved, that the Secretary transmit a copy of this resolution to the parties interested." This resolution was adopted.

Dr. Britton's paper on "Hæmaturia" was taken as read.

Dr. Ferguson, M. P., Welland, was asked to take a seat upon the platform.

The Association proceeded with the next order of business, the reports of Committees.

The report of the Committee on Legislation was read by Dr. W. B. Geikie, Toronto.

Your Committee beg leave to report that the following bill amending the Medical Act, was adopted at the last session of the Legislature. Beyond this, your Committee is not aware of any other legislation affecting the Province. A copy of the Bill No. 175, 1891, accompanied the report. The adoption of the report was seconded by Dr. Wishart. Carried.

Dr. Spencer, Chairman of the Committee on Credentials, presented the final report of that Committee; 193 ordinary members, and 7 guests were registered as attending this meeting.

There were 28 applications for membership, all of which were accepted. The adoption of this report was seconded by Dr. Sheard. Carried.

The report of the Committee of Public Health. Owing to the absence of the Chairman on Public Health, Dr. Kitchen, of St. George, the report was taken as read.

The Committee on Publication reported through Dr. Primrose, all the papers read at the meeting of the Association to be divided between the two Toronto journals. The report was adopted.

Dr. Price Brown, Toronto, moved as follows: That the following amendments to the By-laws as recommended by last year's Committee on By-law, be adopted.

1. That the Advisory Committee be added to the list of standing Committees.

2. That Committees upon the following subjects: Surgery, Pathology, Medicine and Physiology, Materia Medica, Therapeutics, Obstetrics and Gynæcology, Ophthalmology, Otology, be added to the list of temporary Committees.

3. That the Code of Ethics of the Ontario Medical Association be the same as that of the Canada Medical Associationas recommended by the former in 1889—Constitution Art. X.

This report was seconded by Dr. Wishart, on the condition that clause No. 2 be omitted. Resolution was adopted and the change in the By-laws ordered.

The Commitee on Business presented their final report through Dr. MacDonald, Chairman.

The report of the Committee on Necrology was read by Dr. Lett, of Guelph, as follows: During the year three members of the Association have been called away by death. Dr. C. Irwin, of Kingston, died 13th of August, 1890, aged 48 years. The deceased member was a member of the Ontario Medical Council from 1875 to 1885, Vice-President of the Ontario Medical Association, 1881, Professor in Medical Jurisprudence Royal College of Physicians and Surgeons, Kingston, 1882 to 1888, Professor in Clinical Medicine, 1889 to the time of his death. Dr. Irwin's kindly and sympathetic nature won for him the high esteem and good-will not only of his *confrerés* but also that of the profession in general, and secured for himself a large practice.

Dr. J. B. Tweedale, of St. Thomas, who graduated in Victoria University in 1862, passed away during the year.

Dr. John Madill died at Alliston on the 2nd February, 1891, one month after the death of his

wife. He was a graduate of McGill University, 1867.

The adoption of this report was seconded by Dr. R. A. Reeve, and carried.

The Committee on Audit reported through the Secretary that the books of the Treasurer had been duly audited and found correct.

The Committee on Coroner's Inquests reported progress and asked leave to sit again.

The report of the Treasurer was read by Dr. E. J. Barrick, which was adopted and carried.

A vote of thanks to the Ontario Medical Council for the accommodation so freely given to the Association for its different meetings, was moved by Dr. Powell, seconded by Dr. Wishart. Carried.

The President then declared the meeting adjourned.

Selected Articles.

OBSERVATIONS UPON THE TREATMENT OF CERTAIN CASES OF FATTY HEART.

The following observations based upon the record of a case of extreme interest that occurred in my practice during the summer of last year, are intended to apply to those cases of fatty heart that are associated with obesity, where the symptoms of cardiac embarrassment are due rather to an overloading of the heart muscle, both superficially and between its fibre, with a deposit of adipose tissue, than to a true fatty degeneration of the muscular fibres. I am anxious to define this clearly at the outset, since I do not wish it to be supposed that the treatment I am about to advocate should be applied indiscriminately to all cases where the diagnosis of "fatty heart" has been made. We must distinguish as far as possible between a mere fatty deposition and infiltration, although we know that the former condition probably can never exist to any considerable extent without the latter resulting to some degree as an effect. But treatment that may be successfully pursued in cases where the symptoms are dependent upon fat accumulation might be followed by baneful, if not positively fatal, results in other cases where degeneration is at the root of the disease.

With this definition as to the nature of the class of cases to which the remarks that follow are intended to apply, I will now proceed to a brief narration of the case, the extreme interest of which has prompted me to bring its record before you this evening.

The patient, a gentleman, æt. 50, in very comfortable circumstances, I first saw in April, 1889, but at this time there was nothing noteworthy in his symptoms. On May 8th, 1890, immediately after his return from the Isle of Wight, where he had spent the winter, he called on me, complaining of attacks of breathlessness, accompanied with difficulty in walking, occurring once every three or four weeks for the previous six months, usually in the afternoon or evening, and lasting from four to six hours. His height is 5 feet 7½ inches, and at this period he weighed 14 stone 5 lbs., while his girth at the umbilicus was 42 inches. For several years he had led an inactive life, with considerable self-indulgence in alcohol, particularly in the form of malt liquors. He had had no previous illness bearing upon his present condition, excepting an attack of influenza during the epidemic in February, which appears to have left him in a very debilitated state.

Physical examination on May 8th revealed as follows: Lungs healthy; heart's apex beat scarcely palpable, but normal in position. Right border indistinctly made out through the massive chest wall to be about one inch to the right of the sternum. First sound muffled and indistinct at apex, no murmurs anywhere. Pulse 72, feeble. Digestive system: appetite poor, pain at pit of stomach half-an-hour after food, flatulence, tendency to diarrhœa and morning sickness. Urine, pale, clear, acid, sp. gr. 1008, no albumen or sugar.

On June 6th I was called to see him in one of the above-mentioned attacks of breathlessness. I found him lying upon his back on a sofa, face more or less livid, and drawing his breath with very considerable difficulty. Pulse regular in force and rythm, but more feeble than usual. A hypodermic injection of ether improved his condition temporarily, though the attack did not quite pass off for an hour or more. I now prescribed for him half-a-grain digitalis, with one-thirtieth grain arsenious acid in a pill, and a mixture containing liquor strychniæ ℥ v., and acid nitromur dil ℥ xv., in the dose to be taken after food, enjoining at the same time as much rest as possible, and a light nutritious diet.

Similar attacks occurred on the 7th and 8th of June, and indeed almost daily till the 24th, when he very reluctantly consented to keep his bed entirely. After this he had no attack until July 3rd, when he exerted himself more than he should. The urine at this time having become diminished in quantity the digitalis was stopped. I may here state that repeated examination of the urine never at any time revealed the presence of albumen.

On July 11th I found my patient looking decidedly ill. His temperature was 103°, pulse 96, full and bounding. He complained of feeling sick and had vomited after attempting to take some tea. He also complained of slight pain on pressure at the pit of the stomach. His liver was enlarged, reaching 2½ inches below the costal mar-

gin, its edge feeling resistent and smooth, but tender to pressure. Tongue rather brown, but moist, no icterus anywhere. Ordered hot poultices over liver, ice to suck, and milk and seltzer water.

July 12th.—Condition much the same. Temperature 103°. Sickness had ceased. Bowels moved several times; stools watery, small in quantity and very dark.

July 13th, 14th, 15th and 16th.—The temperature continued about 100° to 100.8°. Bowels moved several times a day, stools of same character as before. The liver remained about the same size, although the tenderness over it decreased. On the 16th I ordered a powder of calomel gr. v. with pulv. ipecac co. gr. x. In the evening of the same day the temperature had come down to 99.8° and the vertical liver dulness had decreased one inch. The same powder was repeated on the 18th, 20th and 22nd, producing a most satisfactory amelioration of all the symptoms, and on the 25th the liver could only just be felt below the costal margin. He was allowed to go out on July 26th for the first time, when his weight was ascertained to be 11 stone 7 lbs., and his girth was 35 inches; that is to say, since May 8th, he had lost in weight 3 stone all but 2 lbs., and in girth 7 inches.

It is to be noted that during the whole time of the liver disturbance, which necessitated absolute rest in bed, there were no attacks of dyspnœa. The nature of the illness at this time must, I think, be regarded as an attack of hepatic congestion with febrile symptoms. Whatever its cause might be it appeared to me, as I told my patient at the time, that the condition of fever through which he had passed had been for him by no means an unmixed evil, since it had proved a very rapid and effectual means of getting rid of a very considerable amount of fatty tissue that had previously embarrassed him, and had without doubt caused the attacks of breathlessness from which he suffered. The febrile furnace once set going had burnt up so much superfluous fat that my patient now appeared a comparatively lean man, with a heart freed from the superabundant deposit upon its surface and between its fibres, that had previously caused its embarrassed action.

I now argued to myself that if I could succeed in preventing the re-accumulation of fat I could almost positively promise my patient an absolute cure. With this object in view I determined to exercise a strict supervision over his dietary, and the plan that I adopted was that recommended by Oertel in his "Therapeutics of Circulatory Derangements," diminishing the amount of fluids, fatty foods, and carbo-hydrates to a minimum, while allowing a liberal supply of nitrogenous food. I need not enter into the details of his dietary during convalescence, further than to say that by gradual modifications I worked him up to the following, which I prescribed on July 28th, and to which he has rigidly adhered ever since.

Breakfast.—One small cup of tea with milk, but without sugar; bread, 2½ ounces; an egg beaten up in the tea, and some lean ham or a lean chop.

Dinner.—A teacupful of clear soup. Of roast or boiled meat, game or fowl, without fat, seven ounces. White fish, green vegetables, no potatoes, carrots, turnips, parsnips, beetroot or artichokes. Bread, three ounces; custard pudding or jelly, stewed or raw fruits, with very little sugar. As beverage two-thirds of a tumblerful of water, or aerated water, either alone or with 1 to 1½ tablespoonfuls of old whisky.

Tea.—One small cupful, with an egg beaten up in it. Bread, 1½ ounces.

Supper.—White fish, game or poultry, with salad or fruit in small quantity; a little cheese; a little whisky and water as at dinner, or a little dry light wine, hock or chablis.

Such was the dietary. In addition, as his strength improved, I advised him to take as much physical exercise in the way of walking as he could, and after a few preliminary turns of a mile or so, on August 1st he managed five miles in the morning, and took a drive in the afternoon, without experiencing any dyspnœa, and with no discomfort beyond feeling a little tired. On August 22nd, when I last saw him, his condition was as follows: Weight, 11 stone 10 lbs.; girth at umbilicus, 36½ inches; appetite excellent, but he keeps strictly to the dietary ordered; heart normal in position and extent, first sound at apex much clearer and more distinct; liver also normal. On September 22nd, writing from the Isle of Wight, where he still remains, he reported, "I am now enabled to walk up hills without stopping, and can also walk seven miles a day on an average. I have had no attack of shortness of breath."

Again, on January 5th, 1891, he wrote: "I am pleased to say that I am well, and can comfortably walk 10 miles without any distressing sensations. I am now more reduced than ever round my waist, it being only 35½ inches, and my weight only 11 stone 10 lbs.

Now, from a consideration of this case one deduction appears to me fully justified, namely, that the disappearance of the cardiac symptoms must have been brought about by the destruction and removal from the body of the superincumbent fat; and, provided one had the power of successfully effecting such fat reduction, there appears to me no reason why all such similar cases should not result in an equally satisfactory issue. Fortunately for my patient he had the good luck to pass through a week of febrile condition, during which his superfluous adipose tissue was consumed. Believing that his pyrexia was not indicative of any particular danger, and realizing the good that

it would otherwise effect, I made no effort to attain its reduction by antipyretic measures.

Recognizing, therefore, the fact that in such cases a cure may be effected provided one can successfully accomplish the oxidation and removal of the fat, it remains for us to consider how this may be best accomplished. We have at present no means at our command by which we can at will produce a given rise of temperature, which shall be absolutely under our control, and by which the necessary fat combustion shall be brought about. We have at our disposal, however, a method by which, though the process be a slower and more gradual one, the same end may be obtained.

There are three objects towards which our treatment must be directed, viz.:—

Firstly. To get rid of the fat already superabundantly accumulated in the tissues.

Secondly. To prevent its further deposition.

Thirdly. To improve the efficiency of the heart muscle.

These indications are accordingly to be met in the following manner :—

Firstly. By a systematic course of well-regulated exercise, which by increasing the process of oxidation shall necessitate an increased consumption of stored-up fat, and its consequent removal.

Secondly. By prescribing a dietary which shall contain a minimum of fat forming articles, and in which the amount of fluid ingested is restricted to the smallest quantity.

The third indication is met in attending to the other two, but some further assistance may be given in the careful exhibition of such heart tonics as strychnia, digitalis, and strophanthus.

Time will not permit me now to enter into the details of the above proceedings, although a few words in explanation and amplification are necessary.

Regarding the exercise, the form advocated by Oertel is the systematic practice of long walks, especially in mountainous districts, the effects of which may be briefly summarized as follows :—

1. The process of tissue oxidation is increased, and consequently accumulated fat is consumed.

2. The increased demands made upon the heart's activity, as shown in the increased number and force of its contractions, has the same effect in improving the tone and contractile power of the organ that the practice of ordinary gymnastic exercises has upon the development of voluntary muscular power.

3. The increase in the loss of water from the body, due to increased perspiration and loss through the lungs, tends to an improvement in the quality of the blood, both by diminishing its volume, and increasing its concentration. Proportionately to its bulk, it is easy to understand that its oxygen-carrying power is likewise increased.

Regarding the dietary, in the first place it stands to reason that only the smallest quantities of fat-forming elements (fatty foods and carbohydrates) must be permitted. If under these circumstances, owing to increased muscular activity, the combustion of non-nitrogenous elements in the body exceeds the amount supplied in the form of fat and carbohydrates in the food, the increased demand must be met from the fat already stored up in the tissues : in other words, the patient's obesity will be attacked, and he will get thinner. "If the fat destruction due to severe exertion be repeated at short intervals of time, the fat stores of the body will be encroached upon more and more, and a minimum will be finally reached beyond which we cannot go."

On the other hand, the dietary must contain a large amount of nitrogenous food. This is necessary for the purpose of restoring the integrity of the muscular fibres of the heart that are already in a weak or degenerated condition, as also for meeting the demands upon the muscular system in general depending upon increased activity.

The amount of fluids ingested must be reduced to a minimum. This reduction alone exercises an influence of no considerable importance in the removal of fat. Oertel mentions two cases in which a considerable and rapid fat reduction was thus effected, no alteration whatever having been otherwise made in the patient's dietary or mode of life. Reasoning from the fact that the deposit of fat always takes place in or upon the adventitia of previously formed blood-vessels, Oertel argues that its formation in quantity is dependent upon the occurrence of local vascular dilatations in which there is a considerable retardation of circulation. Owing to the diminution of the watery constituent of the blood, the total quantity of fluid circulating becomes reduced, the circulation is quickened, venous stasis is removed, and the conditions favorable to fat accumulation being thus altered further deposition does not take place. In addition it seems probable that the inhibition of a considerable quantity of fluid favors the absorption by the lacteals of the products of digestion, and thus indirectly aids fat formation.

The strengthening of the heart muscle it is easy to understand, must necessarily follow upon the course of systematic exercise, as already explained; the improvement in the quality of the blood at the same time by increasing its nutritional value aiding in the building up of an improved quality of muscular fibre. The additional assistance to be gained by the administration of such cardiac tonics as strychnia, digitalis and strophanthus is at the same time by no means to be despised.—A. H. Weiss Clemow, M.D., in *Press and Circular*.

ON POINTS OF AFFINITY BETWEEN RHEUMATOID ARTHRITIS, LOCOMOTOR ATAXY, AND EXOPHTHALMIC GOITRE.

In actual practice we soon discover that Nature does not provide abrupt classifications and symmetric groupings. Thus, the phenomena of locomotor ataxy depend upon distinct internal lesions, and the phenomena of goitre (whether there be exopthalmos or not) are associated with distinct external lesions. Now, some of the same phenomena are also found in a large number of cases of rheumatoid arthritis. The three diseases overlap each other, so to speak, at several points. Does not this go to prove that there is an arthritis which is essentially neutral, apart from all diathetic contamination? These curious facts have a wide significance, and are of much interest to workers in the comparatively untilléd ground of rheumatoid arthritis. If it be true, as Dr. Todd said, that a knowledge of gout is a passport to all humoral medicine, it is possible that a knowledge of rheumatoid arthritis will provide a key which will open many secret avenues of neural medicine.

Pigmentation of Skin.—I believe that I may fairly claim priority in observing and recording some *differentiæ* of rheumatoid arthritis during its early stage. These differential symptoms are striking and obtrusive. They belong to no other group of the large family of arthritis. Many rheumatoid people, belonging mostly to an age between 50 and 65, possess neither the distinction nor the energy to display nerve disturbances; but nearly every case of undoubted rheumatoid arthritis in early or middle life shows marks of cerebro-spinal sympathy in one or more ways. Look for pigment; feel the hands for cold sweats; examine the heart for quick beating and often high tension; and ask whether there be severe or paroxysmal neuralgia. The probability is great that you will catch at least one of these connotative signs. Assuming, then, that there is before you a neural arthritis with a yellow or melasmic bronzing of some part of the body usually sheltered from light, the judgment may at first lean to disease of the adrenal glands. Only for a moment need we dwell upon this, or upon the bare possibility of arsenical poisoning. To Dr. David Drummond, of Newcastle-on-Tyne, we are indebted for a record of the fact that pigmentation, like that which is associated with tuberculous disease of the adrenal glands, is a frequent accompaniment of exopthalmic goitre. The favorite situations of the discoloration are around the prominent eyeballs; on the face generally; neck, armpits, and areola of nipples; abdomen, and inner part of both thighs. The patches are sometimes clearly defined, but often they fade imperceptibly into normally colored skin. Wherever the pigment occurs naturally, there it is found increased; and the color varies from a pale yellow to a deep brown.

Very likely these are those disturbances in the chromatogenous function of the skin which I have described as a common feature of rheumatoid arthritis. The pigment patches are more or less large; their hues are infinitely varied, and they are seen on many parts of the body. Across the forehead there may be a light bronze smear. Beneath the lower eyelids the streak is sometimes very dark, and shines with metallic lustre. The dominant tints on the face are lemon and orange and citron. Occasionally the neck looks as if it had been soaked in a walnut dye; and in one case the complexion of the face resembled that of a mulatto, and it was partially covered with a brown seborrhœa. The arms and hands are often severely pigmented.

Trousseau called attention to leucodermia as a feature of exophthalmic goitre; and in three cases of rheumatoid arthritis I have seen round white patches of skin on the front of the forearm. The pigment of arthritis assumes many forms, one of the most common being yellow spots or freckles; but these are, I believe, never seen in exophthalmic goitre. Further, a larger number of goitrous cases are complicated with discolorment of skin than cases strictly rheumatoidal.

Tachycardia.—In exophthalmic goitre the disturbance of the heart's action may exist for months before any other symptom.

My original observation on the quicknes of pulse which characterizes so many cases of early rheumatoid arthritis has been confirmed by distinguished physicians—Sir Dyce Duckworth, Dr. Samson, Dr. Archibald Garrod, and Dr. Pye-Smith. This form of tachycardia is not at all uncommon; certainly in every urban hospital or infirmary a case must exist now and then, and would be easily found if looked for. How is it interpreted? Is the subject of it called irritable or excitable, or is the tachycardia ascribed to old and forgotten myocarditis? What explanation is given in the official lecture room? Last November we took a kind of census of this symptom at our Mineral Water Hospital, in order to test the numerical severity of the cases of tachycardia then in the house and under my care. Of fifty-four patients occupying my beds, eighteen were unquestionable examples of rheumatoid arthritis, and nine (eight females and one male) had more or less quickness of pulse (average pulse not below 90). Now concerning the nine people above mentioned: the mean age was a trifle more than 42; four of the women were married and had children, and four were single; and the average rate of the pulse (taken in the sitting position) was 104. I have never found a material difference whether the patients were lying or standing, or after mod-

erate exercise. The heart's action is not accelerated by emotion, sudden sights and sounds, or by pain. In none of our cases was there any apparent disease of the valves or the walls of the heart. The pulse is rarely small or feeble; sometimes it might be called hard and tense. We heard no cardiac murmurs, either at base or apex. In these points there is somewhat of a contrast in the behavior of the circulation in exophthalmic goitre and rheumatoid arthritis respectively. But these diseases intimately touch one another in the frequency of the venous hum, which varies in character, intensity, and tone. It is the true vascular hum of pure anæmia and chlorosis. The anæmia of rheumatoid arthritis is of special significance in the tone of its tints and pallors, telling us in a manner not to be mistaken that scrofula and "consumption" are not far away.

In my private and hospital practice it is a matter of routine to search for an enlarged thyroid gland. The occasional coincidence of the enlargement with a moderate rheumatoid arthritis is not sufficiently recognized, but it should be sought for whenever there is a dark stain on the neck. Only one lobe of the gland may be affected. Inquiry about the behavior of the thyroid should be pushed back to early womanhood. Extreme crippling arthritis, associated with exophthalmos and "paroxysmal hurry" of the heart, occurred in an aunt of mine, my father's eldest sister. Very lately Dr. Sansom entrusted to my care a young married lady suffering badly from arthritis of a pronounced rheumatoidal type; and she has a sister afflicted severely with the ocular and vascular symptoms of the so-called Graves' disease.

Tremor and Spasms.—That special upset of motorial function which is shown in tremors is common to both Graves' disease and rheumatoid arthritis. In the former there may be choeric movements of the limbs, and such a disturbance of the respiratory muscles as to cause breathlessness and almost dyspnœa. Tremblings of the head and rapid shakings of the arm are quite common in the history of goitre, and are now and then seen as a phenomenon of rheumatoidal degeneration. I may quote the case of a middle-aged woman, a housekeeper, who was under my care in the summer of 1888, on account of a to-and-fro spasm of a rheumatoidal left arm. The heat of the axilla on the affected side was noteworthy. To the bare touch the sensation of heat was quite acute, and on one day (a cold and wet afternoon in July) the clinical thermometer gave a reading of 100°—exactly 2° in excess of the temperature on the other side. A remarkable example of tremor occurred in a rheumatoidal lady, aged 36, entrusted to my care by Dr. Andrew, of Edinburgh. A shaking of the right arm began in November, 1888, after the death of a child. It did not go on during sleep, or when she was alone and quiet; but anything which caused surprise (whether joy or pain) began or intensified the trembling. It conformed strictly to the type of paralysis agitans, and was quite as uncontrollable.

Akin to the motorial aberration of tremor is the occurrence of muscular spasm. It is only in accordance with the analogy of compound nerves elsewhere that the motor portion of the pneumogastric nerve should be occasionally in trouble; and we see how profound this disturbance may be in the irregular movements of the trapezius muscle, and of the neighboring portion of the sternomastoid. If the partial stoppage of the inhibitive function of the pneumogastric nerve be the proximate cause of the tachycardia, we may measure thereby what the molecular shaking of the spinal accessory must be. These functional shocks of the great eighth nerve are important bonds between rheumatoidal arthritis and locomotor ataxy. In the early stage of both diseases there may be the so-called gastric crises, cramp of the stomach and and vomiting; a pseudo-asthma, or a dransient dyspnœa; and difficult swallowing from inco-ordination of the pharyngeal muscles. This lack of harmonious action in the pharyngeal muscles may be so complete as to lead to regurgitation of solid and liquid food through the nostrils.

Pain.—It is in the grand element of pain that we see the closest sympathy between locomotor ataxy and rheumatoid arthritis. The pain of a rheumatoidal limb may come and go in the same way. As a matter of chronology, pain now and then visits a rheumatoidal patient almost before any articulate symptom can be detected. The wife of a medical man whom I saw in 1887 had a painful condition—acute and paroxysmal—of the whole right arm. There was nothing to account for it except an early and slow osteo-arthritis of the carpus and elbow-joint. In 1888 a lady was sent to me from the north of England for the treatment of sciatica. There was a melasmic smear on each temple, and the bright orange splash on the forehead. The freckles on the skin over the knee-joint told their own tale, and a careful clinical examination revealed a "grating" and a difficulty in the movements of both knee and hip-joints. The sciatica was purely secondary to the arthritic changes. I do not discuss the connection now; my plea is that it is much more than a chance event. Generally the specific rheumatoidal neuralgia of the lower limb is, so to speak, pain in bulk; the sufferer clasps the thigh all round, and says that the pain is in every part of it. Sudden pains run up the arm—often beginning in a particular finger—and a grievous neuralgia, which simulates that of locomotor ataxy, is often felt in the region of the shoulder and the upper arm.

The burning and gnawing pain, the tinglings,

and the sensations of cold and heat are common to both the diseases that we are now considering. But they are linked together in the closest way by the ruin of joint structures. Much mystery has been thrown around what is called Charcot's joint lesion, as though it was a special trophic affair. Few people have, I imagine, really believed this; and it is refreshing to find that Dr. Frederick Taylor, in his excellent *Manual of Medicine*, plainly professes his belief in the identity of the rheumatoidal and Charcot lesions. The same view is supported by Dr. Archibald Garrod, in his complete monograph on *Rheumatism and Rheumatoid Arthritis*; and he quotes Mr. Morrant Baker as a surgical authority on the same side.

Some Uncommon Symptoms.—I travel a little outside the title of my paper in order to glance at some erratic phenomena which cannot be formulated just yet.

Bulbar Warnings.—In early rheumatoidal troubles we see, now and then, warnings and resemblances of bulbar paralysis.

Athetotic Contractions.—The mimicry of athetosis in the grasp of the rheumatoidal hand is sometimes most remarkable. The fingers may bend and extend without any coherence or consistency of action. Abduction and adduction may be equally irregular; and I have seen the fingers engaged in slow involuntary movements when the attention has been directed elsewhere.

Glossy Skin.—"Glossy skin" belongs to the group of dystrophies and anæsthesiæ, so well described by Dr. Ord. This condition of skin—*atrophodermia neuritica*—is a common sequel of neuritis. When the fingers are affected they become smooth, shining, and dry; they taper in form, and their color is pink or red. The nutrition of the nails is more or less injured. If anything were needed to prove the inadequacy of the naked surgical doctrine that rheumatoid arthritis is a result solely of mechanical wear and tear, it would be the phenomena of glossy skin. As a sequel of pure rheumatism or pure gout, this symptom shows that rhematoidal degeneration has begun, and that it should be treated as such without delay.

The danger which lurks in glossy joints is illustrated by a petty accident which happened to me last winter. A lady of middle age, sent to me by Dr. Miller, of Fort William, had bent rheumatoidal fingers, and there seemed no harm in trying to extend them by degrees. One day, however, I put her under the influence of methylene in order to apply a little more force than usual; and I had the misfortune to split the skin on the flexure side of the terminal joints of two fingers, with sudden and profuse hæmorrhage. Fortunately, I had means for staunching blood at hand, and I prudently desisted from doing anything further.

Influenza.—My last remark refers to the connection between rheumatoid arthritis and influenza. In several cases I have been able to identify the beginning of the rheumatoidal lesions with a severe attack of influenza in the winter of 1889-90. So convinced were the patients of the sequence of the diseases that in every instance it was mentioned to me as a fact about which no doubt could exist. The influenza passed off, but an ominous weakness was left behind. During this interregnum of depression and spanæmia a slow inflammatory process seized the carpal and tarsal articulations; there might be a gradual quickening of the pulse, but no pyrexia. There is a real danger of being lead to treat these cases as if they were of the ordinary rheumatic kind; but no blunder can be more damaging to the patient or more hurtful to the credit of the practitioner. In one instance the substantial good which I had accomplished for a rheumatoidal patient, an elderly lady, during three visits to Bath in 1888 and 1889, was entirely undone by a single bad attack of influenza in February, 1890; and about a year ago she came once more to Bath, somewhat in despair, and as crippled as ever.

My chief object in this paper has been to point out the lines which our clinical enquiry may most profitably take; and that enquiry may lead us ere long to a broad generalization that shall embrace phenomena now grouped under various titles. I have purposely refrained from speculation; our appropriate function is at present to collect and record facts. The work is full of interest, and there is every encouragement to go on. My debt of obligation to our Mineral Water Hospital is beyond all words; the clinical material gathered within its walls is of priceless value to the candid observer who has a "Platonic passion for knowledge," and the just mind which can sift and weigh that knowledge when found.—Dr. Spence, in *Br. Med. News.*

ON THE VALUE OF LEECHING IN SOME DISEASES OF INFANTS AND CHILDREN.

Venesection has not been used as far as I am aware in cases of infants and children, but bleeding has always been effected by means of leeches.

This useful remedy has been too much neglected of late years, and I offer a few remarks on the cases in which experience has proved its great benefit. Leeches are of most service in the treatment of pneumonia in young children, and particularly in cases of acute consolidation of the lung from exposure to cold.

As it is usual for physicians to be called in when the symptoms have assumed a really serious aspect, I can speak with most certainty and satisfaction of those cases where the conditions were of the gravest character.

In five such cases the medical advisers were of opinion that recovery could not be hoped for, and some difficulty was experienced in obtaining the permission of the parents to resort to a plan of treatment which presented the apparent objection, that in such conditions of exhaustion it could only hasten the fatal end.

This objection has probably been the chief reason why practitioners have feared to incur the responsibilities of bleeding, and some time will elapse before popular prejudice in regard to this matter will be overcome.

In one case two children, æt. 3 and 5 respectively, went to Dartford to spend the Christmas with relatives of their parents. It was the year of the great snow-storm, that is ten years ago, when the intense cold was the cause of serious illness and mortality. I was met at the railway station by the medical adviser of the family, and informed that I had come too late to be of much assistance, as the youngest child had died a few hours before, and the elder could not in his opinion live through the night.

The case presented the usual signs and symptoms of excessive consolidation of the lung. There was dulness and tubular breathing over the whole of the left lung. There was doubtful crepitation at the base of the right lung. The pulse was 150, the respirations were between 60 and 70, and the temperature was 104°. All the usual remedies had been administered, and the parents had given up hope of the child's recovery. As it was their only child, the scene was one which would naturally impress itself upon the memory. In the other four cases the conditions were generally similar to those above described, and the same hopeless view was entertained on the question of recovery. The children were all under six years of age. They all recovered.

In prescribing the application of leeches in such cases as was done in those above referred to, the following directions should be given. Three or four leeches, according to the age of the child, should be applied over the right or left anterior thorax, and when the leeches fall off the hæmorrhage should not be arrested, but linseed poultices or hot fomentations should be applied for two or three hours to encourage bleeding. Probably great prostration will occur, and it is proper to support the patient generously with beef tea and port wine. After the warm applications the chest should be covered with wool, but the bleeding allowed to cease spontaneously. In two of the above cases the bleeding was arrested before this occurred, and in both it was necessary to repeat the application of leeches.

In cases of true croup, arising generally from exposure to cold, and where the symptoms are of very acute character, I have often seen great benefit obtained from leeching. When a child of about four years of age I can recollect being treated for such an attack by an esteemed friend of the family, the late Dr. John Webster, of Brook Street, and that personal experience of the relief which followed the application of leeches has not been without effect upon the treatment I have usually advised under similar circumstances.

There is another class of cases in which great relief is generally obtained from leeches applied to the precordial region, viz., those of mitral insufficiency, and congenital heart disease, where urgent cardiac and respiratory distress demand prompt attention.

Before concluding these brief remarks I may be allowed to suggest for consideration the difference in the effects obtained from venesection as compared with leeches. This subject was carefully considered by the physicians of the early part of this century, and particularly by Dr. Wardrop in his work on "Blood-letting," (1835).

As our individual opinions on the value of venesection or leeching ought to depend on personal observation rather than on any theories we may entertain, I have confined myself to the results of my own experience.—R. Lee, M.D., F.R.C.P., in *Med. Press.*

COCAINISM.

The chief facts about cocaine in relation to cocainism are thus summarized:

1. It is the acutest and most absolute destroyer of inhibition, and of the moral sense generally, that we yet know.

2. The morbid craving is very intense, and control is absent.

3. The dose requires to be increased faster than that of any other such drug to get the same effect.

4. The delirium and hallucinations of all the senses of single doses become chronic in cocainism.

5. Its immediate effects are more transient than those of any other such drug, but this does not apply to the craving set up.

6. The treatment of cocainism consists in outside control of the patient, in stopping the drug at once, in careful watching, nursing, the use of every sort of food that will keep up the strength, and of the bromide of ammonium, brandy and wine, tea and coffee, and possibly a hypnotic, like paraldehyde or sulfonal, for two or three nights at least.

7. A patient suffering from cocaine can be usually certified as insane so far as the presence of delusions are concerned, but he gets over these so soon, and yet is so far from real cure, that certification and sending to an asylum is not a satisfactory process altogether. We need cocainism included in any special legislation for dipsomania.

The writer also considers among morbid crav-

ings and paralyzed control, masturbation, sexual perversion, morbid indecision, etc., and finally sums up the whole subject as follows :

1. That many morbid and hurtful uncontrollable cravings exist apart from those for drink, morphine, chloral, or cocaine.

2. That there is a distinct class of "inhibitory neuroses" that may be accompanied by little intellectual or emotional disturbance. The objects of the morbid cravings are often accidental.

3. Some of the most morbid cravings and examples of loss of control are found connected with the reproductive function, in regard to which, too, perversions of object are also very apt to accompany such morbid cravings.

4 For the existence of many cases of such reproductive loss of control, prostitution is probably responsible, and the unnatural habit of masturbation for many more.

5. The reproductive instinct is, in some cases, morbidly transformed into uncontrollable impulses toward suicide and homicide.

6. Cravings to break and destroy, accompanied by little intellectual disturbance, that cannot be controlled are often met with.

7. The state of morbid inaction is often closely allied to morbid impulse, one sometimes taking the place of the other.

8. There are cases where there is a morbid loss of control over general conduct, in ordinary matters, and cravings to do quite harmless acts.

9. There is a morbid condition of brain automatism, apart from hynotism, in which there is little or no power of inhibition, but at the same time no active cravings, the conduct being regulated by the will of others, or by chance suggestion from without or within.

10. Loss of control often precedes, for some time, the other mental symptoms of an attack of active insanity.

11. Inhibition may be lost in one direction only, while in most others it may be very strong—gambling being often an example of this.

12 All brains must have some "excitement" to keep them healthy, the important question being how to select the kind of excitement that will not lead to morbid craving, and that can be easily controlled.

13· Morbid indecision may be an example of paralysed control.

14. We may have morbid and uncontrollable muscular action, not purposive, and not attended by ideation or emotion at all.

15. It is a fact that in man's medical pyschology that control is almost always lessened at night or in the darkness as compared with the day, the night being the time for morbid indecisions, fears, superstitions, and a tendency to mistake the subjective for the objective, his higher powers then undergoing a process of partial "dissolution." Man, in fact, is a less evolved being as regards his inhibition at night than during the day, and his brain is far more liable to disturbance of the controlling functions in disease.—*Quar. Jour. Inebriety.*

MEDICAL NOTES.

Dr. Brubaker recommends the use of the following preparation for *pruritus* :—

R.—Acid. hydrocyanic. dilut.	fʒij.
Sodii borat.	ʒj.
Aquæ rosæ.	fʒviij.—M.

Sig.—Use as a lotion.

Prof. Da Costa states that, in the treatment of *hepatic calculi*, all sugars and starchy foods must be avoided, and recommends sodii phosphas, in one drachm doses, three times a day, in hot water.

Dr. Brubaker recommends the following prescription for *spasmodic cough* :—

R.—Acid. hydrocyan. dilut.	fʒj.
Tinct. sanguinariæ.	fʒiv.
Syrup. senegæ.	fʒss.
Syrup. tolu.	fʒij.
Aquæ laurocerasi. q. s. ad	fʒviij.—M.

Sig.—fʒj t. d.

Prof. Da Costa, in the beginning of an attack of *influenza*, lays great stress on giving ten grain doses of quinine, three times a day ; and as there is great depression, whisky throughout the disease. Symptoms are to be treated as they arise.

Prof. Da Costa states that, in the treatment of *chronic interstitial nephritis*, nitro-glycerine may be given in doses of two to three, or increased even to thirty drops (if necessary), three times a day. At the same time give ergot, in a half-drachm or drachm dose, three times a day.

Prof. Da Costa recommends the following treatment for *cerebro-spinal fever* : Bromide of potassium, ten grains every two hours ; also opium, the very best. In cases where headache is very severe, local bloodletting by leeches or cupping is of great benefit. Laxatives should always be given.

The following prescription is claimed by Dr. Brubaker to have a greatly beneficial effect in *asthma* :—

R.—Liquor. potassi arsenitis.	gtt. ij.
Potassii iodidi.	gtt. x.
Syrup. tolu.	
Aquæ.	āā fʒss.—M.

Sig.—This dose t. d.

—*College and Clinical Record.*

ETHERIZATION IN CROUP.—Dr. F. Betz contributes an article to the current issue of *Memorabilien*, which, though founded on only one case where etherization was tried as a treatment for croup, is yet of sufficient interest to merit notice.

He commences by pointing out that in croup the tendency towards death is by no means commensurate always with the morbid condition of the larnyx anatomically considered, the nervous system often playing a considerable *rôle*. The case he describes was that of a child thirteen months old, to whom he was called by another practitioner in order to assist in the performance of tracheotomy. The child was breathing with the greatest difficulty, expiration and inspiration being equally noisy; the hypochondriac regions were strongly drawn in at each inspiration, also the lower intercostal spaces anteriorly; the alænasi were working strongly, and the child kept clutching at its throat, where the larynx was very prominent, and at its ears, and twisting its head around as if there were both pain and a sense of obstruction. It would not drink or stay in bed, the face wore an anxious expression, and the head was re-tracted.

No membrane could be detected in the throat, and there was no sound of air entering the lungs when auscultated from behind. On the left side percussion was dull from want of expansion of the lung. Altogether the case was apparently hopeless. Notwithstanding the dangerous character of tracheotomy in children so young, preparations were made for its performance, when the writer suggested that ether inhalations should first be tried. A mixture was ordered of three parts sulphuric ether, one part acetic ether, and one-tenth part menthol, of which three drops were given as inhalation on a folded handkerchief every quarter of an hour. The idea was by means of the vapor of ether and menthol to act on the mucuous membrane of the larnyx, which, as is well known, lies somewhat higher than usual in croup, and thus to contract the bloodvessels, to lower the temperature of the part, to decrease œdema, to lessen secretion, and to allay the irritation in the larnyx by the production of some amount of local anæsthesia. In addition to these, Dr. Betz had the further object in view of inducing partial general anæsthesia so as to give the child rest, and to allay the spasmodic contractions of the muscles connected with respiration. In a couple of hours a decided change for the better had taken place, the child, being quieter, and some air evidently entering the lungs. The inhalations were continued therfore, but at intervals of half an hour. Six hours later the respiration had become much less noisy, the contractions less, and the dyspnœa far less urgent, enabling the child to drink. The face had regained its proper color, and the child was pretty comfortable, so that there was no longer any need to think of tracheotomy. The regular administration of the inhalation was stopped, but another mixture of a somewhat similar character, containing three-tenths of a part of menthol, was ordered, in case of any recurrence of the alarming symptoms. Fortunately the subsequent progress was so uniform that no recourse to this was required. The object of increasing the menthol was to obtain greater refrigeration and to enable it to penetrate further into the air passages. The writer remarks that Trousseau used to prescribe chloroform inhalations in croup, but he is disposed to prefer his own mixture of ether and menthol. Whether such etherization has any power to loosen false membranes further experiments must show; but when tracheotomy or intubation is for any reason inadmissable in undoubtedly membranous croup, this treatment may, he thinks, very fairly be tried. The inhalations ought not to be continuous, but intermittent, and the medical man should for the first hour or two administer them himself. *Lancet*

MODERN TREATMENT OF SCIATICA.—The modern treatment of sciatica, based upon an enlightened pathology, represents a revolution in therapeutics, and varies radically with the type present. While many of the drugs and measures in use in former years are still in the neuralgic type, the pharmacopœia of sciatic neuritis is an entirely new one. A summary of the most reliable of the modern anti-neuralgic and analgesic remedies will include phenacetine, antipyrine, antifebrin or exalgine, cocaine, and osmic acid, the last two used hypodermically alone. Of these, phenacetine is by far the most reliable and satisfactory. Doses of seven and a half grains, given at four or six hour intervals, I have found quite effective, though larger quantities may be given with perfect safety, if necessary. Exalgine I have found after repeated tests, very unreliable. It is, of course, advisable to antagonize by proper medication any cachexia which may be present, and tonics, including change of air, will be found of value in all neuralgic states, A combination of iron, quinine and arsenic is a common formula, and answers quite well.

It is in the treatment of neuritis of the sciatic nerve that we have to note the most radical innovations in therapeutics, and the greatest advancement in results. It is of primary and essential importance in these cases to look for and, if possible, remove the cause. This may be either mechanical and local, or constitutional. Among the local causes may be mentioned, in addition to wounds, strains, and hip-joint disease, tumors of the pelvis, fæcal accumulations, uterine displacements, varicose veins, and aneurisms. Exposure to cold may also be cited as a local excitant, though it probably acts in a double capacity. Toxic conditions of the blood give rise to a local neuritis occasionally. Lead and arsenic among the metals,

diabetic states, alcoholism, syphilis, and certain micro-organisms, as in malaria, have been cited as causes. Bury, in an article published in 1888, in the *Manchester Medical Chronicle*, called attention to the frequent development of neuritis in association with tubercular phthisis and typhoid fever. Thrombic occlusion of a local blood-vessel may be the explanation in some of these cases. Removal of the cause, where the relationship is clear, is at times all that is necessary in the line of treatment. If this is not determinable, the treatment resolves itself into three cardinal principles—the relief of pain, the antagonizing of inflammation, and absolute rest of the part. Of these three, the last is most important. The patient should not only be put to bed and kept there, but he should be mechanically restrained from exercising the function of the diseased nerve. This can be best accomplished by applying a splint, preferably a long hip-splint, extending from axilla to foot.

An ice-bag, or heat for inflammation and to hasten absorption, massage, or the continuous galvanic current to the nerve are useful in appropriate cases.—Dr. Pritchard, in *Am. Jour. Med. Sciences.*

Injections of the Serum of Dog's Blood upon Tubercuous Patients.—Injections of the serum of dog's blood upon tuberculous patients have been tried by Verneuil (*Le Progrès Médical*, Feb. 21, 1891), the results of which have been recently communicated by Richét to the Société de Biologie. The observations of Langlois, Héricourt and Saint. Hilaire have been confirmed by those of Verneuil from experiments made on two cases of surgical tuberculosis.

The first one was that of a young man suffering from a pleural fistula, the result of a purulent pleurisy and a subsequent surgical operation. The patient presented a state of depression and of pronounced anorexia, and had continuous vomiting. After a dozen injections, of one or two cubic centimetres each, administered in the course of twenty days, there were noticed an increase of bodily weight, an increase of strength, and a return of the appetite. After the first few days the vomiting completely disappeared. The patient was greatly benefitted.

The second case was that of a young girl, also suffering from a fistula, as a consequence of a coxalgia. This patient, tuberculous and syphilitic at the same time, suffered from anorexia and great debility. However, after the injections, all feeling of fatigue disappeared; she ate well, and gained four pounds in bodily weight.

The preceding results agree with those previously obtained by Bertin, of Nantes, and Pick. These experimenters, however, employed in their trials the serum of goat's blood, but this does not act as a bactericide on the microbe of tuberculosis. In this relation, Nocard has reported a case of experimental tuberculosis in a goat.—*University Med. Mag.*

The Treatment of Varicose Ulcers.—Dr. J. Brann states that a large experience with this class of cases has convinced him of the superior advantages of a 10 per cent. ointment of zinc in lanolin (zinc oxid. 15.0, lanolin 110.0, ung. emoll. 40.0). This is applied as follows in cases of ulcer of the legs: The surface of the ulcer is thoroughly washed with lukewarm water, carefully dried with a compress, and the salve spread on a soft piece of linen applied to the sore and retained by a handkerchief or strip of linen. The patient remains in bed until the sores have cicatrized. The good effects of this treatment soon become apparent, the pains and itching disappear, and the profuse watery secretion is arrested, the greater part of the transuded fluid being absorbed by the lanolin which has hygroscopic properties. The ointment forms a protective covering under which healing takes place, while the lanolin by virtue of its antiseptic powers prevents decomposition of the secretions. In cases of unhealthy ulcers, the application should be renewed four or five times daily for the first few days. After three or four days, the surface of the sore will be found much cleaner, and cicatrization will have occurred at the margins, and then the ointment need only be applied three times daily. Once a day, and preferably in the morning, the ulcer should be irrigated with lukewarm water and dried, and before each application any remaining secretion is removed with absorbent cotton. Since employing this treatment the author has not found it necessary to resort to skin transplantation.—*Allg. Wein. Medizin. Central-Zeitg.—International Jour. Surg.*

Look After Your Sleep.—Insomnia is rightfully regarded as one of the marks of an overwrought or worried nervous system, and, conversely, we may take it that sound sleep, lasting for a reasonable period—say from six to nine hours in the case of adult—is a fair test of nervous competence. Various accidental causes may temporarily interfere with sleep in the healthy; but still the rule holds good, and a normal brain reveals its condition by obedience to this daily rhythmic variation. Custom can do much to contract one's natural term of sleep, a fact of which we are constantly reminded in these days of high pressure; but the process is too artificial to be employed. Laborious days, with scanty intervals of rest, go far to secure all the needful conditions of insomnia. In alloting hours of sleep, it is impossible to adopt any maxim or uniform custom. The due allowance varies with the individual. Age, constitution, sex, fatigue, exercise, each has its share of influence. Young persons and hard workers naturally need and

should have more sleep than those who neither grow or labor. Women have by common consent been assigned a longer period of rest than men, and this arrangement, in the event of their doing hard work, is in strict accord with their general physical construction and recurrent infirmities. Absolute rule there is none, and it is of little moment to fix an exact average allowance, provided the recurrence of sleep be regular and its amonnt sufficient for the needs of a given person. So that fatigue does not result in such nerve prostration and irritability as render healthy rest impossible.—*Lancet.*

TREATMENT OF PENETRATING WOUNDS OF THE ABDOMEN.—After a careful study of the subject, both in practice and in the experimental laboratory, I deduce the following conclusions:

1. All cases of penetrating gunshot wounds of the abdomen demand laparotomy; most others also require it.

2. The operation should be done immediately after the injury, if possible, so as to control bleeding before the patient is exhausted.

3. Any time within twelve hours may be regarded as the "time of selection," but the lapse of many hours or even days need not prevent operation, since death from septicæmia is likely to occur.

4. A condition of collapse is not an insurmountable contra indication.

5. The existence of peritonitis demands, rather than forbids, an operation.

6. In gunshot wounds Senn's hydrogen gas test should not be employed, as the indications are *always to operate*; perforation of intestine is not necessary to render the wound fatal. In other penetrating wounds the test may be employed.

7. Laparotomy is, in such cases, comparatively an insignificant operation. Any surgeon of ordinary skill ought to be able to successfully operate.

8. In case of emergency the operation here described can be made without an elaborate set of instruments. A success can be obtained by the use of only (*a*) a knife, (*b*) scissors, (*c*) needle and thread, (*d*) hæmostatics and (*e*) *good judgment.*—Dr. Lamphear, in *Weekly Med. Rev.*

AN EASY METHOD OF FEEDING PER RECTUM.—Mr. Y. M. Jones-Humphreys, L.S.A., writes (*Lancet*): Some months ago, having to treat a bad case of gastric ulcer by rectal feeding, etc., I devised an apparatus consisting of a small funnel, a piece of elastic tubing ½ inch in diameter, 1½ feet long about 4 inches of glass tubing (by which the descending fluid can be watched), and joined on to this an ordinary flexible catherer. The atmospheric pressure is sufficient to send any fluid into the rectum, and I have never noticed any return of the fluid, absorption being slow but efficient. The instrument is an improvement on the old enema apparatus in use. The claims for this method are: (1) It is extremely simple, the patient being able to pass the catherer into the bowel without experiencing any pain or unpleasantness: (2) It is cheap and easily made: (3) After once being shown, the most inexperienced person can use it, and thus we can be sure our patient will have small quantities of nourishment at frequent intervals: (4) The fluid is slow in its passage, and thus nearly the whole quantity becomes slowly absorbed. In any case requiring rectal feeding, I venture to hope that my professional brethren will find this simple method of use to them, and a source of comfort to their patients.—*Hospital Gazette.*

VIBURNUM PRUNIFOLIUM IN DYSMENORRHŒA.—Since its introduction to the profession fifteen years ago, *viburnium prunifolium* has held its own as a remedy for dysmenorrhœa against many drugs then lauded to the skies, but now long forgotten. It will certainly relieve dysmenorrhœa, if the testimony of thousands of intelligent physicians is worth anything. In the nervous phenomena of the climacteric it will diminish reflex activity, acting in precisely the same lines as the bromides, but without the great general depression of their long continued use. Alone, it is not sufficiently sedative to relieve pain, but more more markedly anti-spasmodic remedies—such as hyoscyamus, cannabis Indica, camphor, and conium—must be employed.—*N. Y. Medical Journal.*

PRURITUS OF THE VULVA.—Tarnier gives the following formula:

℞.—Hydrargyri bichloridi,	.	30 grains.
Alcoholis,	. . . . .	2½ drachms.
Aquæ rosæ,	. . . . .	10 drachms.
Aquæ detillatæ,	. . . .	30 drachms.

M. et ft. sol.

This lotion is applied in full strength morning and evening, in the vulva pruritus of pregnant women. The lotion may cause, at first, a severe smarting, necessitating the use of cold water after the application, but the smarting gradually disappears on continued use, and the pruritus is soon relieved.—*Jour. de Med. de Paris.*

LEUCORRHŒ.—J. D. Ebert, M. D., Dundee. Ind., says:

℞.—Vaseline, ...	1 ounce.
Golden seal, ...	1 drachm.
Listerine, ...	1 drachm.

Mix all together and stir briskly while being warmed to reduce the vaseline to a fluid state. Sig.—Use freely on cotton tampon once or twice a day.

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ASEPSIS A LA MORT.

The profession generally does not suffer as much as do medical editors, from the tiresome reiteration of the names of certain fads, recent discoveries, new methods, and specifics. But any medical man who reads his journals, and we opine that but few of the profession are without more than one, must sometimes grow weary of the repetition of such terms as Pasteurism, Koch's lymph, asepticism, etc. How great then should be the commiseration felt for the medical editor, who, week after week, from year's end to year's end, is obliged to have passed before his vision these same terms, world without end, in scores of exchanges? "Koch, and Lister, and Senn; Senn, and Lister, and Koch;" ——, till the brain begins to swim.

But the journal must be kept abreast of the times and so there is no respite; for the *clientèle* must know, so far as the editor has the power and opportunity to inform them, all that is new and strange, as well as all that is old and practical and of daily use in the science and art of medicine. Perhaps being only human, he sometimes comes wrongly to the conclusion that his readers are as weary of the grind as he is, and so leaves some of the newest fads severely alone. Kochism is dead. Why then weary his readers with dissertations on a defunct subject? Pure antiseptic treatment—pure asepsis means *cleanliness* and nothing more. Why keep the asepsis stop always turned on?

Then the ridiculous suggestions made by the *ultra* aseptics are a weariness and a burden, when will they come to be repeated *ad infinitum*. There is a deal of truth in the remark of the sailor who had been on a whaling voyage, that "pork and beans for dinner for fifty or sixty days running is very nice, but when the same articles were served for that repast every day for three years, the result produced was a slight sense of monotony."

The latest question regarding asepsis is that proposed and seriously discussed by an American contemporary, viz., as to whether nurses should be allowed to attend surgical cases while menstruating. It is said that several surgeons at Chicago and New York are so impressed with the septic properties of menstruating nurses, that they have excluded them from all major operations. The reason urged is, that menstrual blood is already partially disintegrated, and that it rapidly becomes offensive. This is true, but it is also true of other excretions, as urine, fæces, or perspiration. So if menstruating nurses are to be excluded, so ought, according to the principle, perspiring men, or men who had ——, but it is unnecessary to carry the comparison further.

If the suggestion, or alleged practice, be carried out, it will prevent female nurses attending to their duties as attendants on surgical cases for about one-fourth of the time, a very serious aspect of the question to them. Lawson Tait "cannot conceive of anything more ridiculous" than such suggestion; and we, for the sake of the common, hen sense of humanity, trust that this fad may soon be relegated to its proper place with those that "have had their day and ceased to be."

THE LITERARY EQUIPMENT OF THE AMERICAN MEDICAL MAN.

(*Continued from June No.*)

To return from this digression. The great fault of most writers on medical subjects is a very slovenly and inaccurate use of terminology, due to dense ignorance of the most rudimentary Latin and Greek. One of the cleverest and most useful little works on the practice of medicine, written by one of the most successful teachers on the staff of so really good an institution as the Jefferson Medical College, Philadelphia, and dedicated to no less eminent a physician than Dr. Costa, abounds with such barbarities as these: *argentum*

nitras, "the use of diaphoretics *are*," *retinitis albuminuria*, *lithi citras effervescentes*, *sodii salicylicum*, *calcii sulphide*, and so on. The amusing part of it is that the worthy and really able author starts in with the stern determination to use Latin names or nothing for his drugs throughout.

Harper's Magazine for May, contains an interesting article on Bacteriology, written in popular style, by a bright and prominent American bacteriologist. The article is redolent of enthusiasm in the work, and sympathetic, broad intelligent interest in the subject, and shows intellectual and literary capacity much above the average. Yet the author shows the cloven hoof of neglected primary education more than once. He uses, for instance, "micro-organs" and "micro-organisms," as convertible terms, succumbing to the inevitable desire of his nation to shorten things and crowd as much as possible into life, even at the expense of scholarship and accuracy.

A paper read last year before the American Medical Association, by the Professor of Medicine, in the leading Medical College of the western slope, an M. A., M. D. of Jefferson College, Philadelphia, the author of half-a-dozen text books, and evidently a thoroughly efficient medical man, contains numberless instances of the same deficiencies of early training. His paper is a very clear defence of "American *vs.* European Medical Education," but he talks of "some *backwards* settlement of Canada," "men who wear *decolleté* shirts and dress in the most *blazé* style." It may be that the last French adjective is meant to veil a pun. In spite, however, of these deficiencies, the profession is moving gradually onward and upward. In Canada, especially in Ontario, the literary standard is higher even than in Britain, that is to say, the literary standard as determined by examination rather than by antecedents, family training, and associations, for it is a trite and disagreeable truth that many of our graduates in Arts can neither speak nor write decent English, such is the *vis inertiæ* of early associations. The Council of the College of Physicians and Surgeons of Ontario made a move in this direction when, during the recent session of the Local House, they sought legislation empowering them to demand an Arts degree as a preliminary to entering upon the course of medical study prescribed by them, *when in their judgment, the time should have arrived for so raising the standard.*

Their request was, we think wisely, refused, but it shows that the profession is, of all classes in the community, least satisfied with itself and most conscious of its own needs and defects. The standard will, however, soon reach that point in Ontario. One object in raising it will be the prevention of the over-crowding of the profession. Another way of attaining the same end would be the raising of the fees. But the feeling is that such a course would favor the rich, and too often idle, slipshod students, at the expense of the man who alone is fit to enter the profession and adorn it, the man whose purse may not be equal to the demands of a very high tariff of fees, but who is quite willing to work through a course of any length, preliminary and professional, so that it be thorough and gratifying to his student instincts.

* The above was written before the late meeting of the Ontario Medical Association.

TREATMENT OF THE NIGHT SWEATS OF PHTHISIS.

Huchard reports in the *Rev. Gén. de Clin. et de Thérap.* the results with many medicaments tried for the relief of the sweating of phthisical patients (*Boston Med. and Sury. Jour.*, *London Medical Recorder.*) Among these may be mentioned lead acetate, tannin, phosphate of lime, ergot, atropine, and muscarine. Of these the two first are unreliable, and are seldom used. Probably atropine sulphate is the most valuable (one-half to one milligramme at night). Phosphate of lime should be given in large doses (one or two drachms daily) to produce anhidrotic effects, and even in these doses it has several times failed. Ergot (fifteen to twenty-two grains of the powder at night) is much more reliable. When the sweats co-exist with more or less marked fever, the author recommends the use of quinine combined with ergot.

℞—Quinæ sulph. . . . . gr. xvi.
Pulv. ergotæ . . . . . ʒss.

Divide into four cachets—two or three to be taken daily.

This formula is especially valuable in phthisis with hæmoptysis. Lastly, powdered agaric is an excellent remedy, not equal to atropine, but perfectly harmless, and never causing derangement of digestion. It may well be combined with

tannin or belladonna, given in doses of three or four grains.

The same writer speaks very highly of antipyrin in the initial fever of tuberculous patients. The older drugs, quinine, tartar emetic, salicylic acid, all fail, or have but slight effect. It is especially in this *initial* fever that antipyrin is of great service. One must, however, distinguish between an *analgesic* and an *antipyretic* dose of the drug. To obtain the former effect, one would give a large dose, say (fifteen to thirty grains) in a short time, but this must not be done if its best action as an antipyretic is desired. It is well for this purpose to use constantly decreasing doses (say sixteen grains, twelve grains, eight grains), taking care to divide them so that at no time during the twenty-four hours is the patient not under the influence of the drug. Used in this way, Huchard declares that antipyrin seems to have a *special* action on the tuberculous lesion, and to greatly retard or to arrest its progress.

Professor Combemale (*Bull. Gén. de Thérap.*, Jan. 15, 1891), has used tellurate of sodium, in phthisical and other sweating. It was first recommended by Neusser who gave one-third or two-thirds of a grain in pill once daily. Combemale gave it up to nearly one grain per dose, and tried its effects in eleven cases. His conclusions are, it is a powerful anti-sudorific; a dose of nearly one grain gives the best results; it gives rise to digestive troubles, and especially to a strong garlic odor in the breath. All the compounds of the tellurium cause a very disagreeable odor in the breath, and this must always be a bar to their employment, as it is very persistent and disagreeable.

In addition to the list, sulphonal has been used with success by a few reporters.

THE ONTARIO MEDICAL COUNCIL.

The late meeting of the Ontario Medical Council was a very interesting one. The most important legislation was in regard to the course of medical study. The committee appointed to report on the proposed changes in the curriculum, seems to have taken great pains to gather information regarding the medical course in various countries, of course looking to Great Britain as the one to be emulated as far as possible. They had the satisfaction of seeing their report pass, with some slight amendments only.

In the rough, the course now consists of a matriculation, which is the Departmental University Matriculation in Arts, with Latin compulsory, and the Science subjects as well; together with a course proper.

The number of years to be spent in the medical course proper is *five*. Each student must attend four full winter sessions of six months each, and one summer session. Of the fifth year, which is the practical year for the student, *six months must* be spent in a scientific laboratory, working at physiology or pathology, or in a hospital; while the remaining six months may be spent either with a practising physician or in a hospital.

Graduates in Arts who have taken the Science Course will be required to take only three years' lectures and one summer session.

The examinations have also been changed. Under the new regulations the Council will conduct three examinations, viz.: a primary at the end of the second year, on subjects taught in the first and second years; an intermediate at the end of the fourth (third for Science graduates in Arts) year, on all final subjects, written and oral; and a final at the end of the fifth year, which shall be practical and oral only.

As to lectures, the number of those purely didactic has been reduced about one-half, and the amount of practical laboratory work has been increased. Of course any College may give as many didactic lectures as it pleases, but only about fifty per cent. of the number originally required by the Council will now be required.

The above will give our readers a fair idea of the amended curriculum. We understand that a full report of the proceedings will be sent to each member of the profession in Ontario. This, while expensive, will be, we are sure, eminently satisfactory, as it will enable the profession to know the details of business transacted at each meeting of the Council.

The change to a five years' course is a serious one, and we do not feel called upon to discuss it at length. It is sufficient to say that even in England, with all its wealth, and opportunity for study and culture in the students' early years, the five years' course is only an experiment, and

has provoked a great deal of discussion *pro* and *con*. Whether it will be a success even there remains to be seen. Are we old enough in Ontario, are we rich enough, and are the prizes in the profession sufficiently high to warrant our Council adopting a five years' term of study, after a preparatory or matriculation course which, as it now stands, is perhaps more exacting than in any other country in the world? We understand that certain members of the Council advocated even a much more stringent matriculation; to wit the senior departmental leaving examination. It is a matter for sincere congratulation, that such ultra, and we think utterly impracticable measure did not pass.

The wisdom of leaving all practical examinations till the end of the fifth year, may be doubted. From a pretty extended knowledge of students we are inclined to think that their development will be somewhat onesided by the present arrangement, and that the tendency will be for them to do little hospital or practical work until the fifth year. This, however, is a matter which cannot, with anything like reasonable certainity, be forecast. We can only hope that the change may be, as it is intended, for the interests of medical education, and that Ontario may continue, as she has done in the past, to send out large numbers of thoroughly equipped medical men to all parts of the world.

THE ONTARIO MEDICAL ASSOCIATION,

The meeting of this, the most important Medical Association in Canada, was in every respect a success. The social side of these gatherings was enhanced by the luncheon tendered to the visiting members by the Toronto members. The affair was, while not at all elaborate, quite a success, and did much to promote the friendly and social spirit which prevaded the whole meeting. The papers read were, as a whole, better, and the discussions more general ,and, we think, more interesting than at any previous meeting. The greatest harmony prevailed, and there can be no doubt that all who attended the various sessions were benefited by the discussions and stimulated to further effort.

The president, Dr. Moorehouse, of London, performed his duties in a manner acceptable to every one. His address was listened to with pleasure and profit by a large number of members. A full report of the meeting will be found in another column and many of the papers read will from time to time appear in this journal.

The choice of Dr. R. A. Reeve for President for next year was a wise one, and we may safely affirm that a more acceptable man to the whole profession of Ontario could not have been elected.

TREATMENT OF BED SORES.—Billroth is stated (*Columbus Med. Jour.*), to apply the following treatment for bed sores: Upon the appearance of reddening of the skin, he applies a lotion of vinegar or lemon juice. If excoriation is present, he applies nitrate of silver, and protects the part by zinc ointment or soap plasters. Where grangrene comes on, antiseptic compresses are to be applied, the wound being cleaned by the use of chlorine water, or carbolated oil may be used with care as the phenomena of intoxication may appear. Internally, he employs supportive treatment with wine acids, quinine and musk.

RINGWORM.—The following is good in obstinate cases of ringworm of the body:

℞—Hydrarg. bichloridi, . . . gr. ij.
Tr. benzoin co., ... ℥ j.—M.

Sig.—Paint over the affected parts daily for two or three consecutive days, taking care not to cover too great an area or to paint excoriated parts.

FUMIGANT FOR ASTHMA.—Plant (*La Sem. Méd.*):

℞—Stramonium leaves, } of each . . ℥ j.
Green tea, }
Lobelia inflata, ... ʒ iij.

Add a saturated solution of potassium nitrate, dry, and preserve in a well-stoppered bottle. A teaspoonful suffices for a fumigation.

OLIVE OIL FOR GALL STONES.—Prof. Germain Sée believes that the fatty acids contained in olive oil dissolve the cholestrin of gall stones. That it is efficient in removing them there can be no doubt. It must be given in large doses.

CREOLIN IN DISEASES OF THE NEW BORN.—The substance, which goes under the names of *liquor antisepticus*, and Jeye's disinfectant, is now quite extensively used as an antiseptic, germicide and deodorant. It is used in solutions of a strength of 5 to 20 in 1000, as an ointment, 1 to 3 in 10

of lard, and on a dry dressing, 2 to 4 in 100 boric acid. Dr. Schwinz (*Rev. Mid.*) gives the following results in certain diseases of the new-born, in which he has used it:

1. Purulent ophthalmia of the new-born. In ten cases irrigation was practiced with a 1 per cent. solution. In only two of the cases was the inflammation not of a severe character, and in these the cure was complete in four to six days. In the other eight cases the treatment was continued four or five weeks without perceptible improvement, after which treatment with boric acid and nitrate of silver was used. The use of the creolin was more or less painful.

2. Muguet. In eleven cases which had been treated for a long time with chlorate of potassium, permanganate of potassium, boric acid, etc., irrigation of the mouth and pharynx for five to seven days with a 1 per cent. solution of creolin produced a complete cure.

3. Omphalitis of the new-born. Applications of pure creolin were made in several cases of umbilical peripblebitis, and all traces of the inflammation disappeared in four days.

4. Erysipelas of the new-born. The erysipelatous patches were rubbed twice daily with pure creolin with the most satisfactory results. In no case was there any evidence of poisoning.

5. Acute gastro-enteritis. Creolin was used in five cases of this disease, the following formulæ being employed:

℞.—Creolin, ... gtt. ij-iij.
Aq. Canellæ, . . . fl ʒ xx.
Spts. Guimauve, . . fl ʒ v.—M.
S.—A teaspoonful every hour.

℞.—Creolin, ... gr. vij-xv.
Sacchari, ... gr. lxxv.
M.—et. ft chart, No. X.
S.—One or two powders daily.

In almost all the cases the bad symptoms disappeared in three to six days.

6. Surgical diseases in young children. A ½ to 1 per cent. solution of the creolin will produce perfect asepsis of all surfaces and cavities where used, and will be followed by no symptoms of intoxication, as is sometimes the case after the use of sublimate.

THE ANTI-VIVISECTIONISTS IN ENGLAND.—The London correspondent of the *New York Times* (*Med. Rec.*), sends the following as showing how the Government is inclined to deal with scientific matters there: "The principal biologists and scientists of England, headed by Lubbock, Lister, Lockyer, Playfair, Roscoe, and others, to the number of one hundred and fifty, and backed by strong letters from Huxley and Tyndall, yesterday waited on Sir Michael Hicks-Beach, President of the Board of Works, for a second time, to beg that a license be found for the Britith Institute of Preventive Medicine, and for a second time met with a refusal. Their eloquent speeches laid stress upon the national disgrace of a situation in which English students of bacterial growths were compelled to go to Paris, Berlin, and Vienna to study their science, and intelligent inquiry and experimental research were forbidden on English soil, as if it were an impious thing to seek for wisdom in the science of saving human life. Sir Michael Hicks-Beach gave an evasive and roundabout reply, which the London *Times* editorally translates as meaning that the anti-vivisectionists have many times more votes in England than all its men of science put together. English laws pay great attention to conserving the rights of rich men to breed hares, rabbits, and game birds for annual slaughter and maiming by shooting parties, but they sternly punish a man of science who chloroforms one of these rabbits for purposes of experiments, having no earthly purpose but to increase knowledge as to saving human life. But without these grotesque paradoxes this wouldn't be England."

ANTIPYRIN IN EPILEPSY.—Dr. McCall Anderson has recorded a case (*Lancet*), under the heading, "Case of Epilepsy Cured by Antipyrin." The patient was a boy aged nine years, who had been subject to fits for two years and a half. The first fit occurred six weeks after a fall. At first they occurred from four to six times daily, but later they had been much more frequent, occurring as often as from thirty to forty times a day; there was also paresis of the right arm, and, after this had recovered, of the left. Three months afterwards, the fits entirely ceased after the application of blisters to the head, and they remained absent for fifteen months. They began again, however, seven months before the patient's admission to the hospital, and he had as many as thirty or forty, or

even fifty a day. Just before admission, however, they had decreased in frequency, only occurring about twelve times in the day. On admission on December 20th he was put on five grains of antipyrin three times daily, and this dose was increased gradually until January 9th, when the dose had reached twenty-five grains. This was continued until January 16th, and then reduced to twenty grains, and again increased on the 28th to twenty-five grains. During the first six days the average number of fits per diem was 16·5, in the next four it was 13·2, on December 31st he had ten, and on January 1st the same number; on January 4th three fits, and then none till January 28th, twelve days after the antipyrin was reduced, when he had one slight fit. The dose was again increased, and no fits occurred when the last report was received on March 12th. While we have to congratulate Dr. McCall Anderson on the excellent result in this case, which he ascribes entirely to the antipyrin, we would demur in the first place to his description of the result as one of cure, and we should also be inclined to ascribe at least some of the benefit received to the changed conditions in which the patient was placed. It is always difficult to say that an epileptic is cured, and this is especially difficult in the case of a patient who has had a period of freedom from fits of fifteen months' duration on a previous occasion, and subsequent to therapeutic measures entirely different to those employed on this occasion; we should, therefore, hesitate to accept the case as one of cure until a much longer interval of time had elapsed.

THE NATURE AND TREATMENT OF ANGINA PECTORIS.—The *Practitioner* contains Dr. R. Douglas Powell's able paper on this subject (*N. Y. Med. Jour.*). The author believes that angina pectoris rests upon a neuro-pathological foundation, in which the characteristic symptoms range between the wide limits of remedial functional disorder and fatal organic lesion of the cardio-vascular system. Arterial tension is an essential element in the majority of cases. The influence of habitually increased arterial tension in producing at first functional disturbance and ultimate organic lesions of the heart and vessels is great, and the results are widespread and disastrous. The mechanism of vaso-motor angina is paroxysmally increased blood-pressure from spasm of the systemic vessels. There may be intense suffering, and a fatal result without any heart lesion discoverable before or after death. Digitalis combined with nitro-glycerin and nervine tonics or sedatives are of great value. Nitrate of amyl and nitro-glycerin are specially useful in grave cases where there is a definite cardiac lesion. Angina pectoris, which is a disturbed innervation of the heart or vessels, may be arranged for convenience into four groups or manifestations:

1. Disturbed innervation of the systemic or pulmonary vessels, causing their spasmodic contraction and, consequently, a sudden excessive demand upon the propelling power of the heart, violent palpitation or more or less cramp and paralysis ensuing, according to the reserve power and integrity of the organ—*angina pectoris vasomotoria.*

2. Essentially the same mechanism, but with the same excessive demand made upon a diseased heart—*agina pectoris gravior.*

3. The trouble may commence at the heart from irritation or excitation of the cardiac nerves, or from sudden accession of anæmia of cardiac muscle from coronary disease—*primary cardiac angina.*

4. In certain condition of the blood, or under certain reflex excitations of the inhibitory nerves, always, however, with a degenerate, feeble heart in the background, we may observe intermittence in its action prolonged to syncope—*syncopal angina.* This group would include the vagus angina pectoris of Ross.

TEMPTATIONS OF QUACKERY.—Says the *Med. Rec.*: A woman physician of this city is said to have expressed the following views: "It takes a deal of conscientiousness to keep a physician from becoming a quack. It's such an easy thing to quack when you know your patient wants you to, and that because the patient wants it, it would perhaps be beneficial in the end. By quacking I mean resorting to clap-trap and unscientific methods, such as the faith cure and its like. No one but a physician has any idea how great a demand there is for this among intelligent people. They don't want the honest, straightforward exhibition of the action of drugs on the body. They want a mystery about it, an exhibition of healing as a divine force—something that appeals to the imagination. And be-

cause it is a subject for the imagination the demand comes not from the ignorant and unthinking, but from the most intelligent and best-informed people. I have known some of the most logical and clear-headed people in this city to offer such a resistance to scientific rational measures in medical treatment and insist so strongly upon some illegitimate and inadequate course, as to put the honest physician's patience to its last resorts. It isn't quite that they like to be humbugged. They don't know it for that, though the physician does. They want something for the imagination to work on. And that's the stronghold of the quack practitioner. It takes an honest man or women to practise medicine honestly."

HUXLEY ON THE AIM OF LIFE.—In a recent autobiographical sketch, Professor Huxley says (*Med. Rec.*): The last thing that it would be proper for me to do would be to speak of the work of my life, or to say at the end of the day whether I think I have earned my wages or not. Men are said to be partial judges of themselves—young men may be, I doubt if old men are. Life seems terribly foreshortened as they look back, and the mountain they set themselves to climb in youth turns out to be a mere spur of immeasurably higher ranges when, with failing breath they reach the top. But if I may speak of the objects I have had more or less definitely in view since I began the ascent of my hillock, they are briefly, these: To promote the increase of natural knowledge, and to forward the application of scientific methods of investigation to all the problems of life to the best of my ability, in the conviction, which has grown with my growth and strengthened with my strength, that there is no alleviation for the sufferings of mankind except veracity of thought and of action, and the resolute facing of the world as it is when the garment of make-believe by which pious hands have hidden its uglier features, stripped off. It is with this intent that I have subordinated any reasonable, or unreasonable, ambition for scientific fame which I may have permitted myself to entertain to other ends; to the popularization of science; to the development and organization of scientific education; to the endless series of battles and skirmishes over evolution; and to untiring opposition to that ecclesiastical spirit, that clericalism, which in England, as everywhere else, and to whatever denomination it may belong, is the deadly enemy of science.

PASSAGE OF THE BACILLUS OF TUBERCULOSIS FROM THE MOTHER TO THE FŒTUS.—Birch-Hirschfeld and Schmorl (*Beitrage zur Path. anat. und zur allg. Path.—Br. Med. Jour.*), have put on record a case which they claim is the first in which it has been definitely proved that in the human subject tubercle bacilli pass from the mother to the fœtus. The patient was a young woman who, shortly after the commencement of her first pregnancy, began to show signs of phthisis; these gradually became more marked, and she succumbed at the seventh month of her pregnancy. Immediately after the death of the mother the fœtus was removed by Cæsarean section. The necropsy on the mother showed abundant evidence of phthisis; not only in the lungs, but in other organs, tuberculosis was detected. Although the fœtus had been alive shortly before the death of the mother, it was dead when it was removed. The chest was at once opened, but there was nothing noteworthy about the lungs. The fœtus was then taken to the laboratory, the surface of the abdomen was washed with per-chloride of mercury, and the cavity was opened with sterilized knives. No tubercles could be seen on any of the organs. Minute pieces of the liver, the spleen, and the kidney were placed in the abdominal cavity of two guinea-pigs and a rabbit, with all antiseptic precautions. One of the guinea-pigs died in fourteen days, and tubercles were found in the different parts of the abdominal cavity. The second one was killed about six weeks after inoculation, as it was clearly ill, and many tubercles were found in the peritoneal cavity. The rabbit lived three months; on its death many tubercles were found in the liver and the lung. Tubercle bacilli were found in the umbilical cord and the blood of the umbilical vein.

CHRONIC LARYNGITIS.—

℞—Ext. Pinus Canadensis (dark), (S. H. Kennedy's), ... ℥ j.
Drosera rotund, ... ℥ ss.
Glycerine (pure), ... ʒ iv.—M.

Sig.—15 to 30 drops, three or four times per day. Also in nasal catarrh it is almost a specific

MENTHOL.—In most varieties of pruritis, whether general or local, the following lotion is quite reliable :

℞—Mentholis, ... ʒ j.
Spts. vini rect., ... ʒ j.
Aquæ, ... ʒ ij.
M. et add.
Acid acetic, dil., ... ʒ v.—M.
Sig.—Apply with a sponge as required.

In localized skin diseases where an antipruritic ointment is needed, the following is a good combination :

℞—Campho-phenique, ... ʒ j.
Mentholis, ... ʒ ss.
Ung. aq. rosæ, ... ʒ j.—M.

Books and Pamphlets.

THE POCKET MATERIA MEDICA AND THERAPEUTICS ; a *Résumé* of the Action and Doses of all Officinal and Non-officinal Drugs now in Common use. By C. Henri Leonard, A.M., M.D., Professor of Medical and Surgical Diseases of Women and Clinical Gynæcology in the Detroit College of Medicine. Cloth 12mo., 300 pages. Price, postpaid, $1.00. Detroit : The Illustrated Medical Journal Company. Toronto : Carveth & Co.

This volume has been in preparation for the past four years. A description of the drugs of as late an introduction as 1891 are to be found in its pages. The author claims to have operated everything of merit, whether officinal or non-officinal, that could be found either in standard works or from many manufacturers' catalogues. The scheme embraces the Pronunciation, Officinal or Non-officinal indication (shown by an*), Genitive Case-ending, Common Name, Dose and Metric Dose. Then the Synonyms, English, French and German. *If a Plant* the Part Used, Habitat, Natural Order, and Description of Plant and Flowers, with its Alkaloids, if any. *If a Mineral*, its Chemical Symbol, Atomic Weight, looks, taste, and how found, and its peculiarities. Then the Action and Use of the Drug, its Antagonists, Incompatibles, Synergists and Antidotes. Then follow its Officinal and Non-officinal preparations, with their Medium and Maximum Doses, based, so far as possible, upon the last U. S. Dispensatory. Altogether, it is a handy volume for either the Physician, Student or Druggist, and will be frequently appealed to if in one's possession.

SURGICAL BACTEROLOGY. By N. Senn, M.D., Ph. D., Professor of Surgery in Rush Medical College, Chicago, and in the Chicago Polyclinic, etc, etc. Second edition, 1891. Philadelphia : Lea Bros. & Co. Toronto : Carveth & Co.

This book of 270 pages will be welcomed by the profession as coming from one of the authorities of the day, in surgery. Dr. Senn's name is so generally and so favorably known to our readers that we need give the present book no other endorsement than to say that it is worthy of its author. In the preparation of this edition the author has added new facts illustrative of the relations of pathogenic micro-organisms to the various surgical lesions, and eight new illustrations have been inserted in the text descriptive of microbes not illustrated in the first edition. The book has also been divided into chapters, which it is hoped will prove useful for a better classification of the material and for more ready reference.

THE STAINING AND IDENTIFICATION OF TUBERCLE BACILLI.

We notice that a Mr. Baker, of London, has fitted out a small box 8 x 6 x 4 inches, containing all the necessaries for the immediate discovery of the tubercle bacillus. The idea is a good one, and we hope that some enterprising Canadian may follow as a good imitator, if indeed there be not something of the kind already under way. The usefulness of such apparatus in many cases of difficult diagnosis, is obvious.

COSMETICS, a Treatise for Physicians and Pharmacists. Being a translation of Dr. Heinrich Paschke's work. New York : William Wood & Co. Pp. 286, $1.50. Toronto : Carveth & Co.

The work contains about 300 formulæ for the preparation of all kinds of cosmetics, and will be of service to any one desiring a knowledge of the subject. Dr. Paschke is docent at the University of Vienna, and has made the work a successful one.

THE MODERN ANTIPYRETICS ; their Action in Health and Disease. By Isaac Ott, M.D., Exfellow in Biology, Johns Hopkins University, etc. Easton, Pa. : Vogel. Toronto : Carveth & Co. 1891.

A useful *résumé* of the properties, doses and therapeutic indications of the coal-tar products.

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Original Communications.

TREATMENT OF THE TUBERCULOUS PROCESS AS FOUND IN JOINTS.*

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Mr. President and Gentlemen, — I shall alter somewhat the title of my paper as it appears upon your list, and shall address you very briefly upon the "Treatment of the Tuberculous Process as Found in Joints." Upon the invitation of the President to read a paper before this Association, I have selected this subject, not with the expectation of establishing any new tenets, nor of arraigning any orthodox ideas, but simply in the hope of exciting a discussion upon a subject which I believe to be of very great interest, not only to the surgeon but to the general practitioner. I am aware that there are certain definite principles of treatment, in more advanced cases, which are pretty universally accepted. Yet it is in the treatment of surgical tuberculosis in its earlier stages that the young surgeon encounters the gravest difficulties, and I am sure there are others present who, like myself, have been perplexed by the great diversity of opinion expressed by leaders of surgical thought in the discussion of the subject.

With your permission I will very shortly review the more salient points in the pathological process of the disease, as a knowledge of this is of course essential to the proper treatment of the condition.

Tuberculous disease of joints occurs most frequently in children of say from 3 to 9 years of age, and in growing youths, as in early life rapid tissue transformations are going on in and around joints, and here the tortuous and multiplied capillary system affords excellent opportunity for the lodgement, and a rich field for the development of tubercle. Prior to puberty, the tuberculous process begins more frequently in the cancellous tissue of the ends of bones. After that period its starting point is probably more frequently the synovia. In the former case it is (*a*) central, or (*b*) perhaps more rarely peripheral.

On the synovia, or in the cancellous tissue may be seen the tubercles more or less discrete; in other words, the foreign infectious particles which give rise to the inflammatory process.

Should the process begin in the synovia, the membrane assumes an appearance of increased vascularity and thickening, spreading out laterally in tufts between the cartilages, whose substance they gradually invade, projecting their processes into the cartilaginous structure (as Bilroth says, like the tendrils of the vine into the parent tree). These projecting processes of synovia gradually honey-comb and destroy the cartilage, and thus work their way onward into the cancellous tissue of the articular end of the bone, leading to a condition of carious destruction.

When the disease begins in the bone the inflammatory process extends into and destroys the cartilage, or the cartilages may become completely detached or removed by absorption or degeneration.

The products of the inflammatory process (*a*) may be so devoid of vitality that a retrograde change begins, ending in caseous or carious degeneration and rapid generalization of the disease, the patient dying of tubercular meningitis, or phthisis, or leading to chronic sinuses which undermine the health; or, on the other hand (*b*), the process may be arrested by its enclosure in a firm tissue-wall, the result of the inflammation itself.

What I would more particularly wish to hear discussed, however, by the members of this section, and what I am sure would be more interesting to the greater number of those present, is the treatment to be adopted in these disagreeable cases. And here I fancy every one must have an experience peculiar to himself. When men of such undoubted repute as Mr. Croft and Mr. Barker, on the one hand, and Howard Marsh on the other, can deduce from an identical series of cases

* Read before the Ontario Medical Association, June, '91.

treated, principles of treatment that are diametrically opposed the one to the other, it is proof sufficient to my mind that this subject is as yet decidedly unsettled and indefinite, and that the lesser surgical mind may have an experience of its own without presumption.

Let us review most briefly then the different methods of treatment at present adopted, and the arguments advanced in favor of each. I presume we may classify the different methods as, I. The Expectant; II. The Operative; subdividing the latter into (*a*) Erosion, (*b*) Excision, (*c*) Amputation.

The expectant plan of treatment consists in maintaining the joint in a state of absolute rest, and building up the patient constitutionally with local treatment, as indicated more particularly in the subduing of local inflammation. By improving the patient's vitality we render the tissues more capable of resisting the invading force. By reducing local inflammation we render the soil less fit for the invading germ. Should the joint become distended with fluid, or caseous degeneration have occurred, it is pretty freely incised and drained.

The exponents of this plan defend their treatment on the following grounds:

I. The development of tubercle depends largely on "the fitness of the soil." But the period during which the soil is fit—and there is therefore danger of tuberculous development in joints—is quite limited, roughly speaking between the 3rd and 10th year. Therefore, if by well-known hygienic and palliative measures we can arrest development of tubercle during this time, can assist nature to encapsulate and isolate it during the short period, the joint is comparatively safe.

II. Heredity is certainly an important factor in rendering a joint liable to a tuberculous attack, but statistics prove that children of scrofulous parentage, and who may have strong evidence of tuberculous invasion, yet recover entirely with appropriate care, and without surgical interference.

III. The progress of an ordinary inflammatory process in the neighborhood may determine the course of a tuberculosis. For example, how often do we find the history of a tuberculous invasion in a joint, dating from some trauma in the neighborhood? As an apt illustration of this Mr. Marsh mentions the advance of a tuberculous epididymitis during a gonorrhœal inflammation, and its recession when the inflammation subsided.

Therefore, he reasoned, should tuberculosis of joints be due to trauma, reduce the resulting inflammation and thus check the tuberculous process.

IV. Unhealthy surroundings often determine the invasion in those predisposed to the disease; yet it is equally true that when this is remedied and the patient placed under the most favorable hygienic conditions, and he is constitutionally built up, he will often recover perfectly.

V. Finally the gentlemen of the expectant school should claim that surgical interference is quite liable to excite generalization of the disease, and that it is impossible to be certain that every particle of tuberculous matter is removed unless the section go beyond the epyphisis. Now as the excisionist proposes to operate upon young children this would obviously destroy the utility of the limb. This is not by any means an ingenuous contention, and certainly adds nothing to the strength of the position occupied by the non-operators.

The excisionists believe briefly:

1. That tuberculosis is *practically* a malignant disease, or at all events, that it possesses the most dangerous elements of malignancy, viz.: inevitable systemic infection when not entirely removed.

2. That entire removal of the diseased portion precludes the possibility of generalization.

3. That excision shortens the period of suffering.

4. Finally that the operation should be done as soon as (so called) suppuration is present, or as Mr. Barker thinks, as soon as the presence of caseation were even suspected. Because danger, generalization, etc.

If the first of the contentions be true, viz.: that tubercle is practically malignant in its nature, then I fancy the discussions were closed most decidedly in favor of early and radical operation. But is it true? Ashurst (in his Encyclopaedia of Surgery, Vol. I., pp. 831, *et seq.*) says in effect that the most reliable, constant and perhaps only definite proof of malignancy is the invasion of neighboring glands. This does not of necessity hold good in tuberculosis of joints, and although metastatic recurrence is a frequent incident in the natural history of both diseases, it does not follow that they are identical.

Erasion or thorough scraping away of the products of the disease is an operation very frequently performed in this city, and has much to recommend it. But it is, of course, only of value in those cases where the disease is confined to the synovial membrane or the articular ends of bones, and is not available in such joints as the hip, shoulder and elbow.

In reference to the two great schools, the non-operative and the excisionist, it seems to me that a rigid adherence to either would be unjustifiable.

The non-operator takes too much for granted in considering a quiescent encapsuled mass of tubercle to have no longer a pathological significance. He wishes to consider as dead, that which *is only sleeping*, and which may be roused into lamentable activity and vitality, by the first shock of traumatism or exposure.

The excisionist, on the other hand, is apt to be too radical in his views, and to forget that the sacrifice of a joint is no trifling matter. Without laying down any hard and fast rule, each of these methods has its *rôle* in the treatment of this condition. Even amputation is sometimes a necessity, or at least the preferable method of treatment; as for instance was very well illustrated by a case operated on by Dr. Grasett some time ago in the Toronto General Hospital. Here a young man æt. 24, a farmer, had been suffering intermittently for 21 years, from tuberculosis of the knee-joint. Finally the limb became useless to him. The disease had extended far above and below the joint, and his general health was suffering. To have excised would have required the removal of a large section of bone, with little hope of securing bony ankylosis, and in his occupation the result would have been worse than useless. Amputation was obviously the preferable operation and it was accordingly done.

Each case then should be treated upon its merits, but I think there are certain broad principles which should guide us. If we acknowledge the possibility of the permanent recovery of a tuberculous joint without systemic infection, and bearing in mind the pathological process which takes place during the progress of the disease, I think a point of vast importance is the early diagnosis of the condition. This is often quite difficult owing to the possible absence or trifling nature of pain, the small amount of swelling, the indefinite history and the absence of constitutional symptoms. Having diagnosed tubercle, however, provided the disease is seen in its *earliest stage*, I believe we are justified in every case in adhering to the expectant plan, so long as the disease does not appear to be progressing unfavorably. The joint is fixed immovably and the patient confined to bed, only until any acute symptoms have subsided. The local application of counter-irritants has not, in my short experience, proved of any value. The best counter-irritant is rest to the part. This may be secured by any of the numerous well-known permanent dressings, for a time at least, followed by a fixative-apparatus the most admirable of which is probably Thomas'. The patient is got out of bed and placed among the best hygienic surroundings at the earliest possible moment. In children, more especially, this plan works admirably. Notwithstanding our best efforts, however, caseation is liable to occur. This we recognize by the plastic waxy condition of the neighborhood which pits on pressure. Hitherto having followed the expectant plan carefully, we must now diverge therefrom. We have reached the point when the diseased product has become, or is about to become, a direct menace to the life of the patient, and conservative surgery warns us to remove that product.

A tolerably free incision is made into the joint and all diseased product removed by erosion. This operation, however, is only of definite value when the disease is obviously superficial. Where the disease originates in, and is as yet largely confined to the synovial membrane, that sac is drained by the aspirator and injected with an emulsion of iodoform, as recommended by Mansell Moulin. In those joints in which erosion is not practicable, this is the proper time at which to excise. Should the starting point of the disease be in the bone an early incision should be made down to the diseased area, and all diseased bone thoroughly removed by the sharp spoon. Should this necessitate considerable destruction of bone, and more especially should the joint be already involved, then it seems to me the more rational method would be immediate excision.

Should sinuses form and resist our best efforts at healing, excision or amputation should be our resort. Of course, in the case of the poor man, unable or unwilling to undergo a somewhat pro-

longed treatment, more radical interference is no doubt justified even early in the disease.

My ideas as to the importance of early radical operation are perhaps not warranted by statistics, but I would just like to say that, after careful examination of available statistics, they appeared to me peculiarly unreliable and indefinite, the patient's career, subsequent to apparent recovery, not having been followed for a sufficient length of time.

Perhaps my ideas are also biased by the occurrence in my practice within the last two years of two deaths, resulting from tubercle of the knee-joint. Erosion was done in each case with every precaution. The one, a child of five years, died of tubercular meningitis four months after the operation, when we supposed he was making an excellent recovery. The other, a married lady, æt. 22, seen in consultation by my colleague, Dr. Teskey, died a short time ago of pulmonary phthisis. I am of opinion that free and early excision would have saved these two lives. The *post mortem* table, too, has furnished me with several examples of the imperfect removal of the disease.

For the sake, then, of obtaining the opinions of those present upon this most important subject of treatment, I would make the following propositions:

I. In the early stage, *i. e.*, in the stage of so-called "growing pains," slight limp and swelling—absolute rest to the joint with tonic treatment and improved hygienic surroundings for the patient. Persevere longer in the child than in the adult.

II. The moment caseation or retrograde change begins—a somewhat free incision with erosion, if necessary and possible; but should the process have extended beyond the cancellous ends of the bones, immediate excision is indicated. Never remain satisfied with erosion unless absolutely positive you have got entirely beyond the disease.

III. If, on opening the joint, the disease be found confined to the synovial membrane, the less radical operation of aspiration is indicated.

IV. If the disease be as yet confined to the end of the long bone and the joint not yet invaded, removal of dead bone and diseased products with the sharp spoon should be tried, with the hope of arresting the process. But should the destructive process still continue, excision is indicated.

V. In those joints where thorough erosion is impossible, excision would be indicated at that stage at which erosion would be done in such joints as the knee.

VI. The early radical operation shortens the period of suffering.

VII. Frequently, in case of the poor man, instead of the word excision in the above propositions we should read "amputation."

PERI-UTERINE CELLULITIS.*

BY J. H. JARDINE, M.D., LONDON, ONT.

In this age of progress and mental activity, when it is our boast that we know more than what has been known in any other period of time; in this age of discovery in the microscopical world, when the atom itself has nearly been found, and molecules are mapped out and bounded; in this age of physiological research when the vital process is observed in Nature's laboratory, and the vital principle is just beyond the horizon; in this age when the female pelvis explored from within and without, is no longer a mere clausum, and the female organs of reproduction are exposed to the attack of the surgeon's knife with impunity, and it is generally believed that the average woman could get along very well with, say one-half of them; in this age of speculation and theory; it is well for us sometimes to sit down by the bedside and giving nature a fair field and no favors, see how she eliminates poisons from the system, and repairs the ravages of disease.

The female pelvis is exposed to a great number of mishaps. During menstruation the vascular congestion is great, and a slight chill at any time may change the physiological into the pathological. Copulation brings with it congestion, sometimes physical injury, and it may be animal poisons. Parturition has as its accompanying pressure or engorgement, bruising, laceration, and a general disturbance of the vascular and nervous supply. And with nature's powers thus weakened the omnipresent germs find a nidus, and the wonder is that their ravages are not more serious than we find them. During resolution, absorption of poisonous matter, or extension of inflammation may cause serious mischief. Disease, too, may spread from

* Read before the Ont. Medical Association, June, 1891.

the bladder, rectum, peritoneum, uterine appendages or uterus, and, lastly, surgical interference or appliance may do more harm than good, and inflammation result from this source.

From whatever source the disease may come, the cellular tissues of the pelvis being large in quantity and loose in texture, extensive spread of the disease is the rule, and recovery is generally slow.

A glance at the female pelvis will suffice. The uterus and its appendages (ovaries broad ligaments, Fallopian tubes, round ligaments), with the vagina in the centre, the rectum behind, and the bladder in front, are practically imbedded in the cellular tissue, which helps to support and nourish them, at the same time binding them to the pelvic walls, whilst the peritoneum covers all like a roof, sending folds down between the bladder and uterus, and between the uterus and rectum. Now, although as above stated, inflammation may be derived from numerous sources, such is the resistence of nature's powers to the attack of disease, that seldom do we have serious attacks of cellulitis save as a sequelæ of abortion or parturition, and then the symptoms are very much like those of pelvic peritonitis, with which it is often associated just as pleurisy and pneumonia accompany each other.

The first notice given of the disease is a chill, accompanied by rise of temperature, with pain over right or left ovary, followed (in puerperal cases) by lessening or cessation of lochial discharge, with a peculiar fœtid smell. The pulse is increased, and usually rises to 100 or 120. Vomiting may be present, but not often. Dysuria is often a prominent symptom. The pain may remain over the right or left side or it may spread, and pelvic or even general peritonitis result. In about one week from the onset, hardness is felt in one or both illiac fossæ, which gradually increases for some time, then one or two things happen; either the swelling or other inflammatory symptoms subside, and absorption takes place, with a general and rapid recovery, or the swelling localizes itself, pus is formed, and a pelvic abcess is the result, if in the meantime the patient has not succumbed to the severity of the disease. The length of time a patient may suffer from pelvic abcess is most variable, lasting for, from a period of six weeks to six months, one year, or even eighteen months, and then making a good recovery.

As to the frequency of the disease, I may state that it is not a common complaint in itself, and by itself, but as a concomitant of peritonitis, metritis, ovaritis, salpingitis, general septicæmia, or as a result of operative interference and surgical appliance, it is by no means infrequent. Of the idiopathic cases, most, if not all, are a result of septic absorption. In traumatic cases I believe, induced abortion is the most frequent cause. I have been able to secure a record of about 150 cases from my own practice, and that of Dr. Moorhouse, Niven, Eccles, and others, of the city of London. Of these five died, fifteen resulted in pelvic abcess discharging into the bladder, rectum, vagina, carpass, triangle, and right and left illiac fossæ, but none into the peritoneal cavity. The cause of death in all was exhaustion. Nearly all these cases of abcess were in strumous persons with a family history of pthisis or other scrofulous disease.

Now, as to treatment, I will simply give you my own practice in a typical case, knowing full well that there are many other methods equally good if not better. First and foremost of them all is absolute cleanliness, not only of the patient herself, but of the bed on which she lies, and of everything in the room or coming near her person. This is not only as a curative but as a preventative measure, and if the case is a puerperal one I use carbolic acid injections, one part of the acid to 60 or 70 of hot water; or sometimes bichloride washes, one in 5,000. These I use for two purposes: First, a disinfectant, and, secondly, as an emollient. Indeed, in all cases hot water injections afford marked relief to the patient.

Secondly, rest, absolute rest, if possible, of both mind and body is a *sine qua non* in the treatment of these cases.

In the third place I use turpentine stupes, followed by poultices, and about the third week a blister, to be again followed by poultices.

Fourthly, I use as medicine a pill of opium, calomel and quinine in the early and acute stages of the disease; following this generally with a tonic and supporting system of medicine, stimulants as required, and a diet suited to the exigencies of the patient and the stage of the disease. The bowels are occasionally to be well moved, either by a purgative or enemata.

In treating cases in which the abcess has formed

an armed neutrality is the best. Watch the pointing of the abcess. Open in a favorable site, if possible, and rely on disinfectant washings and dressings, especially dry dressings. Of these I prefer the napthalized jute; and if the case becomes very tedious, and the sinuses extensive, operative interference even to the length of abdominal section, and free incision may be required, but I have never had need to resort to this rather formidable procedure, although I am sure some cases would be benefited by it, and much shortened in their course if the life of the patient were not saved by the timely intervention.

I will not take up your time by recounting all the diseases from which it is to be differentiated, suffice it to say that I have little faith in malarial fever as a result of abortion or parturition, and keenly scrutinize all cases with rise of temperature following these two conditions.

Now, in conclusion, I will simply give deductions from a study of these cases:—

1st. Idiopathic cases are generally of a septic origin, and traumatic cases are mostly secondary to peritonitis, metritis, salpinigitis, ovaritis, or surgical interference or appliance.

2nd. In puerperal cases, antisepic douches, whilst lessening the liability to septic absorption, and thus removing one of the chief causes, is as a routine practice unnecessary, and thus used, apt to do more harm than good.

3rd. As a rule it is a self-limited disease, often however, of a rather chronic character.

4th. Treatment shortens duration and lessens suffering and exhaustion.

5th. The fatality is about one in twenty-five.

6th. Sterility and malposition of the uterus are the most serious *sequelæ* of this most formidable disease.

Reports of Societies.

GYNÆCOLOGICAL AND OBSTETRICAL SOCIETY OF BALTIMORE.

MAY MEETING.

The President, Dr. Henry M. Wilson, in the chair.

Dr. Brinton read a paper entitled, "A Day's Work in Obstetrics." Under this title he related the following cases:—

1. A case of podalic version. 2. A case of normal labor. 3. A case of shoulder presentation; efforts at version unsuccessful; vagina ruptured; the woman dying undelivered. 4. A case of placenta prævia lateralis, treated by internal podalic version, mother and child saved.

Dr. Mittenberger.—There is some discussion in regard to the preference for high forceps and version. I prefer version, but the profession is divided, and the choice comes to a matter of skill and individual practice.

Dr. Neale.—One of the points claimed for version over high forceps is, that in version the narrower diameter of the head comes first. It has been claimed that the same condition is brought about in the use of forceps, by the diminution of the diameter of the crown, so that they are less than those of the base of the skull. I cannot see how this is, for certainly the forceps do not as a rule compress sufficiently to reduce the diameters of the crown to less than those of the base of the head.

Repeated attempts at version have often given bad results when the uterus is contracted and retracted; when there is a neglected cross birth and the child is dead. After a moderate attempt at version has failed, decapitation should be performed by means of Braun's hook; it is certainly a comparatively easy and safe procedure. I have no criticisms to make upon the treatment Dr. Brinton adopted in his cases.

Dr. Brinton.—Since this case of rupture of the vagina has been reported, it has been stated by a pathologist of this city that it is the only one on record. I would like to ask if any of the gentlemen present know of any such cases?

Dr. Mittenberger.—There are certainly on record many cases of rupture of the vagina. I have seen at least two such cases.

Dr. T. A. Ashby.—I once passed a sound through the uterus. The sound went in easily, and could be felt just below the umbilicus. Before this the patient had had pus running slowly from the uterus, which had evidently had its origin higher up. There were no bad symptoms; the woman rode home a distance of eight miles and was not heard from. I once attempted to remove an epethelial growth from the vagina, and all at once the intestines came down. I cleaned away the diseased tissue, closed up the opening with a purse stitch and the wound healed promptly. The patient lived eleven months.

Dr. Geo. W. Mittenberger read a paper upon "Superfœtation and Superfecundation."

Dr. P. C. Williams.—I had a case recently of ovulation during lactation. A lady came to me who had continued to nurse her child and is now five months pregnant. These cases show that there may be ovulation without menstruation, and led me to agree with Dr. Mittenberger.

Dr. Ashby.—I have had cases similar to Dr. Williams. I have been surprised at the frequency with which menstruation returned after apparent removal of both ovaries and tubes. One of the first cases upon which I operated, was one of hystero-epilepsy. I thought I had removed all the ovarian tissue, but found subsequently, that I had not. She began to menstruate about eight months after the operation, and afterwards suffered from metrorrhagia. Three years later I examined her under chloroform and found a small tumor. I operated and removed a small portion of an ovary. She recovered promptly and has not menstruated. Her health is good and there has been no return of the hystero-epilepsy. I have had other cases in which some parts of the ovaries had been left behind. These women continued to menstruate. In those cases where I have succeeded in removing the ovaries entirely, I have not observed the return of menstruation.

Dr. B. B. Browne.—I attended a woman a few years ago who had had seven children and had never menstruated. She was married before menstruation began, and had had children very frequently. I think superfœtation does occur. It certainly does occur in uterus septus. The removal of the ovaries has little to do with the cessation of menstruation, but the tubes have much to do with it, and it is when a portion of the tube remains behind that menstruation continues. Metrorrhagia will occur when the tube is closed at the outer extremity. When a part of the ovary is left, of course a part of the tube is left also.

Dr. W. E. Moseby.—My experience has been such as to make me believe that menstruation does not depend upon the presence of the Fallopian tubes, nor is it independent of the ovaries. Eighteen months ago I opened a lady's abdomen for a severe case of chronic pelvic peritonitis with double pyosalpinx. Both tubes were tied close to the uterus and secured, but after a diligent search no trace of either ovary could be found. Dr. W. H. Welch, to whom the specimens were shown, expressed the opinion that the ovaries had probably been destroyed in the inflammatory process. The patient made a good recovery after very prolonged drainage, made necessary by the sloughy condition of the pelvic contents and the fæcal fistula, which persisted for several weeks. This patient for months has been menstruating regularly and freely every three weeks. In all probability some portion of ovarian tissue escaped destruction. In another case in which I took special pains to remove every particle of each ovary and both tubes on account of severe hæmorrhage, the patient has not had a show during the last twelve months.

Dr. Ashby.—Mr. Tait has maintained the position of Dr. Browne for several years. In one case the patient had been suffering from hæmorrhage ot tubal origin ; I removed both tubes and one ovary. The other ovary having undergone cystic degenertaion it was impossible to remove all the ovarian tissue. This patient has been cured of her metrorrhagia, but still menstruates.

Dr. Opie.—It seems quite well established by *post-mortem* results, that all cases of menstruation following oöphorectomy, are not due to failure on the part of the surgeon to completely remove the ovaries.

The utero-ovarian ligament, however, is sometimes very short, and the button-like section beyond the ligature, which, in such cases, contains ovarian stroma, may keep up a dominating influence. Again, the anatomical shape of the ovary gradually sloping off into the ligament, causes a part of the ovarian tissue to be left on the uterine side of the ligature in spite of the utmost care on the part of the operator.

The rule after child-birth seems to be that menstruation is in abeyance for a variable number of months, but cases have doubtless occurred in the experience of most obstetricians, when it has been uninterrupted during lactation. I have met with a number of cases when women have conceived during lactation, when there was no accompanying monthly flow. Dr. Tait thinks that during, and even after, the monopause, ovulation goes on, though the mucous membrane is disqualified for securing a fecundated ovule. Ovulation may be going on during lactation, but the mucous lining of the uterus may not be well qualified for menstruation or fecundation.

Dr. Burk, of New York, who has a dairy farm, has been performing some interesting experiments, to find out the mode of securing the best quality of milk. He has determined that the heifer, after the removal of the ovaries, can be made a perpetual milker, and that the milk is of better quality than in cows subject to ovulation and impregnation.

Dr. Brinton.—With reference to menstruation after the removal of the ovaries, we have the statement that one or two per cent. of women have supernumerary ovaries, and possibly the return of the menstruation is due to the presence of the third ovary.

Dr. Mittenberger.—Dr. Browne laid much stress upon the fact that menstruation continued when obstructed tubes were present. Menstruation has nothing to do with the passage of the ovule along the tubes, but is due to the immaturation of the ovule. Therefore the tube may be obstructed as much as you please and there will be no results. Battey and Engleman have reported a number of cases of pregnancy after the ovaries were apparently removed by skilful operators. In other cases the ovaries, supposed to be removed, have been found *post mortem*.

Dr. Browne.—In most cases where the ovary and tubes are removed the lumen of the tube is obstructed by the ligation.

Dr. Ashby exhibited a specimen of a ruptured tubal pregnancy, which he had removed from a patient seen in consultation with Dr. Arthur Williams, of Elk Ridge, Ind. The patient was 34 years of age, and gave birth to one child ten years ago. She conceived in February of this year, and about the eighth week of gestation was seized with violent symptoms of intra-pelvic hæmatocele. Dr. Williams was called in, and after examination, diagnosed the condition as a ruptured tubal pregnancy. I saw the patient with him the following day, and upon examination confirmed the diagnosis. The patient rallied from the shock of the first rupture, and one week later a second rupture took place, though not followed with such violent and dangerous symptoms as in the first instance. The surroundings of the patient were so unfavorable that she was removed from her home in Anne, Arundel Co., to the Medical General Hospital, where the laporatomy was performed. Upon opening the abdomen her pelvic was filled with bloody serum, blood clots, and evidences of general peritonitis. The omentum was in such a condition that it was found necessary to remove about three-fourths of the tissue. The patient was critically ill from the 3rd to 5th day from symptoms of intestinal obstruction. Her bowels were moved by administering one grain doses of calomel every hour for twelve hours—every other method having failed. The patient has made a successful recovery. This is the third case of tubal pregnancy I have removed by laparotomy within the past two years, all of them having recovered.

DR. CANNIFF'S SERVICES.

We have much pleasure in copying the following from the Toronto *Globe*. It speaks for itself.

To the Editor of the *Globe*:

Sir,—I trust you will give me space in the columns of the *Globe* to make some remarks respecting one who has faithfully served the city for seven or eight years. I have been hoping and expecting that some one more competent to do so than myself would render honor to one to whom honor is due. Perhaps it is an example of "out of sight out of mind." The splendid work accomplished by Dr. Canniff in public health matters has never been duly recognized. When he commenced his career in sanitary reform there was great ignorance and indifference among the citizens and their representatives in the Council, and even no longer ago than the time of Mayor Manning the medical officer was told by the mayor that such an officer was unnecessary. I have been cognizant of the proceedings in connection with that office, and duly read the carefully prepared and lucid reports issued from time to time from the health office, and know whereof I speak. At the present time there is a general interest felt in sanitary matters, but it was Dr. Canniff who first aroused that interest, and created the desire among citizens to have healthy homes. Looking back I call to mind that it was his action which caused filthy University Creek to be superseded by a sewer, as well as the equally polluted Garrison and Rosedale creeks. Who was it but he who first, and time and again, called attention to the fact that the wells of Toronto were foul and unfit for domestic use, and who was the means of having hundreds closed? I remember when some seven years ago he sounded the alarm that Toronto Bay was no better than an immense cesspool. For years he urged the abolition of privy pits, tried to have abattoirs constructed and slaughter houses abolished, and at almost every meeting of the Local Board of Health urged the construction of crematories and endeavored to protect the citizens from impure milk and ice. In his report to the Board in the spring of 1890, he stated that he knew the character of the ice in the various ice houses, and asked that he might be authorized to compel the dealers to use separate wagons for pure and impure ice, and to have painted upon each different labels, as that in no other way could the safety of the public from impure ice be secured, but the Board declined, and there is strong probability that the increase of typhoid last season was due to polluted ice.

The idea to have the smallpox hospital on the island east of the gap was proposed by Dr. Canniff three years ago. His management of smallpox cases and prevention of the spread of that loathsome disease was his great success. When there was an epidemic in Buffalo three years ago, and the disease was brought to Toronto in seven different places, all of them in crowded streets and houses, the disease did not extend from one of them, a result the late President of the American Public Health Association declared to be marvelous. Year after year the sanitary condition of the island received his careful attention. Some of his recommendations with regard to the filling up of the lagoons or connecting them with the bay, so as to prevent stagnation and have a current through them, were followed. Others were neglected by the Board and Council. When dead fish collected on the shore they were gathered up and disposed of. He made arrangements to have the garbage removed to where it would not endanger the public. Through his instrumentality the slips were dredged out, and when possible at hours when the public were not passing.

Anyone who will look at his yearly reports will see how the Medical Health Department grew and developed under his guiding hand. It may not generally be known that he was in his office at 8

or 8.30 a.m. in summer and 9 in winter. Every report of every inspector was examined by him and instructions given. In spite of manifold obstacles he succeeded in having houses unfit for human occupation vacated. Notwithstanding an indifferent, lukewarm or a hostile board and enemies in authority he made Toronto a healthy city, as the mortuary returns show. This will be seen by his last annual report. Toronto was then far ahead of all the cities in the Dominion. Enemies of the department were continually declaring or insinuating that his system was bad or that there was no system, and not a month before he resigned, out of despair and worn out by worry and discouragement, he asked that veteran sanitarian, Dr. Oldright, to examine his mode of procedure, and this is what Dr. Oldright said: "In pursuance of your request that I should examine into the system adopted in your office and express my opinion upon it, I have to say that I have looked at the various forms and traced the successive steps for the abatement of nuisances and correction of insanitary conditions, for the limitation of infectious diseases, for the regulation of dairies, slaughter houses, junk shops, etc., for recording and filing reports of work done, and for the execution of such other sanitary work as appertains to the ffioce of a local medical health officer. I have had opportunities of seeing the methods employed in Chicago, New York and Boston; and I am glad to be able to say that those adopted by you are similar, and equally well adapted to attain the ends in view."

ONE WHO KNOWS.

Toronto, June 24.

Selected Articles.

ON ULCERATIVE DISEASE OF THE UPPER RECTUM AND SIGMOID FLEXURE.

I wish to call your attention to-day to these two cases, which you will find of great interest and which will repay a very careful study.

You see here two men of about the same age—forty years. One is a strong, muscular carpenter, who has come to us from the South; the other a nervous, slight clerk. The former tells us that he was taken down about a year ago with what was considered at his home an acute dysentery, that he was in bed three or four weeks, and that he has never recovered; that he has lost during the past year about thirty pounds of flesh, though during the past few weeks he has regained some of the lost weight; that he has constant and almost unbearable pain at the end of the spine during the day, but is free from it at night; that he has six or eight bloody, slimy stools also during the day, and that the fæcal matter which he passes is flattened and tape-like, but that he is not troubled with passages of any kind during the night. Mark the effect of rest in ulceration of the rectum!

I have examined this man with my finger, and the examination is negative. Since he has been in the hospital I have also had his passages saved and examined, and we are able to verify his statements concerning them. They are a mixture of blood, mucus, and foul-smelling pus, and the fæcal matter is flattened and ribbon-like.

Take now the history of the other case. He tells me at the beginning that he knows he has a stricture of the rectum. He, too, has been suffering for about a year, though his troubles came on gradually and not suddenly, and during that year he also has lost about thirty pounds of flesh, but, like the other man, he has regained some of it during the past few weeks. He has no pain at any time, though pain is what has brought the other patient to us for relief. At first he tells very much the same story about his passages as the other patient. He, too, has frequent slimy stools and mis-shapen fæces, but when we come to question him more closely we find a decided difference. Both go often to the closet; but this man passes no blood and no pus—only a tablespoonful of clear mucus, and the stools in this case are not flattened, but are lumpy and come away in irregular pieces of varying size and shape. You see how necessary it is, with the most intelligent patients, to be exact and searching in your questions. I have also examined this man's rectum with the finger and I find nothing, and I have brought the patients before you for further examination and diagnosis.

Both of these men represent a class of case the diagnosis of which is attended by as much difficulty as anything in the whole range of medicine or surgery. They come under the care of physician and surgeon alike, and it is entirely possible two examiners of equal acumen will differ in the diagnosis. In fact, I am about to differ absolutely in one of these cases from a man whose opinion I thoroughly respect and whose honesty is unquestioned.

We are here in the presence of disease of just that part of the alimentary canal which it is most difficult to examine—the upper part of the rectum and lower part of the sigmoid flexure—of that part which can neither be reached by the finger from the rectum below nor by the hand from the abdomen above. And ulceration with stricture of this part of the bowel is more dangerous than when lower down, where the rectum is more firmly attached and less movable. One of these patients has flattened, tape-like stools. A stricture in this part of the gut tight enough to cause this symptom

may without warning cause fatal intestinal obstruction, while the same amount of constriction in the middle or lower third of the rectum would be devoid of immediate danger, for the simple anatomical reason that where the rectum is fixed the whole expulsive force of the body can be brought to bear upon the fixed point of obstruction, and fæces can be crowded through a passage so small as scarcely to be noticeable, while in stricture higher up the expulsive effort may easily cause a bending and turning of the gut upon itself which shall render the obstruction complete.

Let me mention a case which will convey very clearly what I mean.

Two years since a patient was sent to me for an examination with the same general history and symptoms that these men have, only he was in better health and seemed to have less serious trouble. He passed a little blood at times, but there was no deformity in the stools, and there had been little or no emaciation. But he was a physician and was troubled about himself. He had pain deep down in the left iliac fossa at the brim of the pelvis, and he was convinced that the blood and mucus in his stools came from a point upon which he could almost place his finger when he pressed down into the pelvis. I examined him with a bougie, and a good-sized one passed without difficulty; I examined him from above and could detect nothing. He had slight hæmorrhoidal trouble, and it was suggested that possibly the blood might come from this. He did not think so, but asked me to remove them. It was done, but after a week the blood reappeared. I then suggested an exploratory laparotomy, which he declined, and I did not urge it, more than half believing the trouble transitory. He returned to his home at a distance, and a few weeks later we heard of his sudden death from intestinal obstruction. The autopsy revealed a small cancerous annular stricture in the lower part of the sigmoid flexure.

Are either of these patients in the same danger? In both, the diagnosis of stricture at this point has been made, and in the one who is passing only mucus the opinion has been given that the disease is probably malignant. From that opinion we shall differ, and for the following reasons. First let us put him on the table and examine him.

Taking a No. 7 rectal bougie of soft rubber, we attach the nozzle of a Davidson syringe to it, and proceed to pass it up the rectum. I did this yesterday, and had a very remarkable sensation. The bougie went up about five inches and stopped, as it usually does at that point. Water was injected through it gently, and after about four ounces had been thrown up there was a sudden giving way of an obstruction, which frightened me, and the instrument was withdrawn. The patient had, however, experienced no sensation, and after waiting a few moments I took the next smaller size and tried again. Again the same obstruction was found at the same point, and, as the water was gently thrown in, the same sudden overcoming of the obstacle, but this time so distinct that the patient was startled, and inquired anxiously the cause. The bougie passed on its full length. The cause of the obstruction which so palpably gave way under the pressure of the water I do not know. I never appreciated the same sensation before, but it was probably a fold of mucous membrane, or the sudden unfolding of a slight invagination.

That examination was made yesterday, and we will now repeat it with the larger-sized instrument which failed yesterday. You see it is stopped at the promontory of the sacrum, which means nothing, and we have recourse to the distention with water. This time there is nothing out of the ordinary. With the usual amount of pressure the bougie passes its full length, and on withdrawing it there is no blood or pus upon it and none flows from the anus, nor has the patient experienced any pain. He is only much surprised that we should so easily have accomplished what others have failed to do and have assured him could not be done because he had a stricture.

Now, has this man any symptoms of stricture of the rectum? None. And the bougie does not indicate a stricture. Had he well-marked symptoms of stricture, I might not put much weight upon the fact of the easy passage of the bougie, for that is only twelve inches long, and a stricture might be just beyond, or the stricture might have been passed by the bougie without our detecting it, on account of its large caliber. But the man has no symptoms of any ulcerative process. His bowels act irregularly and unsatisfactorily, it is true, but so do those of many constipated men. He passes mucus sometimes three or four times a day; so do many people who are suffering from intestinal catarrh. He does not pass pus; he has never passed blood; there is nothing to indicate any destructive process in the bowel; his loss of weight may easily be accounted for by malassimilation of his food; the bougie fails to find any obstruction or any raw and bleeding surface; and for these reasons we tell the man that he has no cancer, that he has no stricture of any sort—in fact, that he is suffering simply from a very common but very intractable affection, intestinal catarrh. We shall put him on an absolute milk diet at a venture, give him small doses of morphine with bismuth for a few days to allay the irritability of the intestine, and you shall see the result.

Now let us take the other patient—the one first described, who is passing blood and pus. In this case also it is necessary to examine the upper rectum and sigmoid flexure, but to do so we shall not, as in the last case, make use of the bougie.

What we most wish to determine here is not the mere existence of ulceration and stricture, for that we know from the symptoms, but the character of the process, whether malignant or benign, and on this point the bougie can give no light. Again, the bougie is a dangerous method of examination in just such cases as these. If an obstruction is met, even the usual one at the promontory of the sacrum, we dare not use even the ordinary amount of force necessary to overcome it for fear of doing fatal injury, for an ulcerated gut may be torn with very little apparent pressure. The rent does not occur from forcing the bougie through the stricture, but from carrying the stricture onward on the point of the instrument in the attempt to pass it.

The point on which the differential diagnosis as to the character of the disease in this case will rest, is the amount of induration and thickening at the ulcerated point. Have we here a large destruction of the mucous membrane, with cicatrization in some places and advancing destruction in others, such as is caused by dysentery; or have we an annular deposit of cancer, from which is coming the blood and pus? To know this we must try and get the disease within reach of the finger, and for this purpose we will etherize the patient and pass the hand into the rectum.

While this is being done, let me give you some other information about the patient, which you will see has a very direct bearing upon the possible line of treatment.

The man is married, has four small children, is a day laborer, and has no means. He cannot even remain in the hospital any length of time for treatment, lest those dependent upon him should want. He has come north with the delusion that he would be cured in a week and return to his work. The problem before us, therefore, is to place a man who is too sick to work into condition to earn a living for his family in the shortest possible time. Now, supposing that we find here simple dysenteric ulceration, what are we to do? Ordinarily the treatment would be prolonged rest in bed, absolute milk diet, and local applications of nitrate of silver or other things—a treatment lasting many weeks, and holding out no certainty even of ultimate cure. On the other hand, should we find malignant disease we should at once do colotomy. All this has been thoroughly explained to the patient, and the decision has been left entirely to him. He knows that if the disease be non-malignant, we can by a colotomy put him back at his work in three weeks; and because of his poverty and the family dependent upon him, he has chosen that method of relief rather than the prolonged and uncertain medical treatment. So, whether malignant or non-malignant, we shall now open the sigmoid flexure; but first we will try and decide which.

At the risk of being tedious, I am going to dwell a moment longer on the indications for the operation in this case. The operation itself is no novel sight in this clinic, as you know, although there will be no one or two points in the technique of this one to which I shall call special attention; and it is much better you should all understand when to do the operation than merely to watch me open this patient's abdomen, bringing the sigmoid flexure out of the wound, and fasten it there. You are all practitioners; an exactly similar case to this may come under your care at any moment; let me ask you if you know of any better treatment for this case than colotomy? Is the case curable by any other means? Possibly. Were the patient able to give us even a month of time, other means would certainly be tried, and I have seen them succeed in just such cases. Certainly I should not do this colotomy at this time unless the patient chose this treatment after a thorough understanding of the case. But after a few weeks of unsuccessful medical treatment I should just as certainly strongly recommend it; and I am willing to do it now, because I know it will at once cure his disease if, as we suppose, it is not malignant. His pain will cease as soon as the gut is opened and the distal portion washed out. He will be able to work at the end of the three weeks, which he can not possibly be by any other plan of treatment. The operation is attended by scarce any danger in his general good condition; he will be comfortable after it is done, and, should he desire it, the artificial opening can be closed when the ulceration is healed. These things we know by past experience. I have taken great pains in many of these colotomies to have the class follow the after-histories of the patients, and hear their conclusion in their own words, and you have yet to hear the first word of dissatisfaction, or to see the first patient desirous of going back to the old order of things. I have a letter here, received this morning, from one of the patients operated upon just a year ago which I have brought for your benefit. We will leave out the thanks and give you the gist of the whole matter: "The artificial anus is nothing. I have a movement from it every morning and think nothing about it the rest of the day. I would not go back to the old condition of things for any amount of money." And this is from a lady in the higher walks of life, the wife of a physician, one of the neatest women in her personal habits I ever have seen, and yet one who had suffered many years from non-malignant ulceration, and was generally spoken of in the city where she resides as "the lady with the air-cushion."

Need I say anything more? If the diagnosis is right in this case, the man will be cured, able to work, and in every way comfortable in a few weeks after this operation; and if wrong, the

same precedure is doubly indicated, for then we are dealing with malignant disease.

My only object in thus dwelling on the indications for the operation in this case is to do away in your minds with the old and popular idea that an artificial anus is a disgusting deformity to which even death itself is preferable—an idea which, I am convinced, those of you who follow my clinic for any length of time will abandon. And yet this same idea governed my own practice, I am sorry to say, for many years; and I count now more than one death which might have been avoided, and much suffering that might have been relieved, had I but accepted the plain teaching of the experience of others on this point and set aside my own foolish scruples.

Proceeding now with the operation, you see that, after the abdomen is opened, the sigmoid flexure presents in its natural position. In this particular case we have to make an opening which shall be completely efficacious in diverting the flow of fæces from the rectum, and which shall entail as little injury to the gut as possible, in order that we may close it in the future with as light an operation as possible, should it be found desirable. To accomplish the first I shall introduce my silver wire under the gut, as usual, and make the sharp spur, which so effectually presents all subsequent passage of fæces beyond the artificial opening. To provide for the second, I shall draw the gut only partially outside the abdominal cavity, shall in its incision avoid as much sacrifice of its wall as possible, and generally try to provide an outlet for the fæcial matter, which can be closed by a subsequent plastic operation which shall not involve an opening into the peritonæum. I have explained to you before how this inguinal incision has this advantage over the lumbar—that almost any form of artificial anus desired can be made at the choice of the operator, while in the lumbar operation the opening must always be essentially the same.

You see that, as the gut is brought to the surface and the suspensory silver-wire suture passed through its mesentery, one longitudinal band is in a most favorable position for suture to the skin. After a few silk sutures have been passed through this, you see that I can bring the whole caliber of the gut above the cutaneous margin and fasten it there, or that I can bring only half the caliber out of the abdomen and fasten the gut in that position. The latter is what we shall do, and the result in these two cases we will see that you are informed of later.

NOTE.—Ten days after operation. Gut opened on second day; solid, involuntary evacuations since. Patient up about the ward. The other patient on milk diet markedly improved. Entire cessation of mucous discharges.

Three months later. The patient with the intestinal catarrh practically cured. The man with ulceration gained eight pounds in the first month and returned to his home. A subsequent letter reports some pain and discharge still, but no trouble from the artificial anus, which he has become accustomed to and does not regard.—Charles S. Kelsey in, *N. Y. Med. Jour.*

THE UTILITY OF VIVISECTION.

Under the present stormy sea of politics lies a question that will sooner or later come again before Parliament: "Shall vivisection be totally prohibited in the United Kingdom?" And as medicine has nothing to hope from outsiders, we cannot afford to maintain an attitude of indifference, unless we are content that British laboratories should become mere parasites upon the Continental ones.

It is not the professional agitator that we need reckon with, but the not inconsiderable mass of worthy people who have been moved by "much speaking" and gross mis-statement to ask, "Is not vivisection immoral and useless?"

If it be useless the charge of immorality need hardly be advanced; but with the great mass of evidence we possess that experiments on animals have *not* been in vain, there is everything to be gained by fair and open discussion of the subject.

Hard as the anti-vivisection party has labored to explain away the discoveries of Harvey and Hunter, it has done little save make itself ridiculous. We are told that Harvey *might* have discovered the circulation of the blood by means other than vivisection; but the dreamland of what might have been is too vague for any save a nation of Laputians, and the fact remains that Plempsius, of Louvain, refused to credit Harvey's discovery till he himself had experimented on certain dogs and watched the flow from their arteries.

The story of Hunter and the stag is known to every student, and the lives saved and the sufferings relieved by that trifling vivisection have now passed beyond all count. Beyond count, too, are the vast number of revelations that experiments on animals have brought forth in more recent times. Few of those who regard medicine in its true light, as applied physiology, will deny the honour due to Majendie and Rokitansky for their investigations upon the action of strychnine; to Traube, for working out the effects of digitalis; to Cohnheim for his researches on inflammation; and when our eminently practical countrymen, Lister, Spencer Wells, Fraser, Horsley, and others tell us that experiments on living animals contributed largely to their success, and thus toward reducing the sum of the world's suffering, does it not savor of the ridiculous when some pseudo philosopher who cannot distinguish the perineum

from the peritoneum assures an admiring audience that no discovery in medicine has ever been aided by vivisection.

Most medical men are aware that digitalis went not very long ago by the misnomer of "the opium of the heart," showing the utter ignorance that prevailed as to its true action. Used blindly it killed as often as it cured, till men set it aside as almost too dangerous for common use. When a tyro screws down the safety valve no wonder the the boiler bursts, and it was only when its physiological action had been ascertained by experiments on animals that digitalis could take its proper place in the *Pharmacopœia*. How many drugs could we use with any degree of accuracy but for these experiments? "Even the action of our simple purgatives," writes Dr. Wm. Murrell, "has been worked out on the lower animals."

To those who harp upon the uselessness of vivisection I commend the following by Dr. Wilks. "I would ask the reader to picture to himself a platform on which Pasteur and Virchow, Owen and Huxley, Humphry and Foster, Simon and Fraser, unite in the statement that the remarkable advance in Medical Science and Art during the last twenty years is due to experiments upon the lower animals; and immediately after a sincere rural dean and a conscientious auctioneer unite with equal solemnity in stating *their* opinion 'that experiments upon animals have led to no useful result. I do not doubt their sincerity, or their modesty, or their good faith; they only lack a sense of the ludicrous'" (XIX *Cent.*, Dec., 1881); but if further proof were wanting we could find it in the very camp of the enemy. Mr. Hutton, one of the champions of the opposing party, in an article in the *Contemporary Review*, April, 1882, admitted the utility of these experiments whilst opposing them on moral grounds, whilst another champion, Lord Coleridge, bears testimony as follows: "I do not say that vivisection is useless, and I am sure I never have said so." Such admissions must be thorns in the flesh of the more fervid members of the party like Cardinal Manning, Miss Cobbe, and Mr. Lawson Tait. And here follows another curious point—Mr. Lawson Tait denies the utility of vivisection, but does not seem to have many qualms about its morality: "Certainly anythimg and everything ought to be done to convict a poisoner, and if nothing short of that would do I would advocate the performance of a hecatomb rather than that such a scoundrel as Lamson should escape."

In short, the justice admits proof of utility but throws out the Bill on moral grounds, whilst the surgeon is prepared to admit the morality if the utility could be proved. A bad day truly it would be for the Anti-Vivisection Society if these gentlemen met on the same platform to advance their diametrically opposed views.

If we take this question of utility out of the arena where the scientist meets the ultra-philanthropist and submit it to the cold impartial scrutiny of the cautious man of business, we find that the insurance companies of France refuse to accept cattle that have not undergone Pasteur's protective treatment against anthrax.

Let our opponents revel in the failure of Koch's treatment if they will, but let them not forget that the open and above-board work of British laboratories is a very different thing from the secret experiments which afford no opportunity of confirmation or expansion.

Upon the question of utility hangs the moral aspect of vivisection. No one contends that it can be lawful and right to inflict needless pain on the lower animals, any more than it would be justifiable to amputate human limbs where there was no hope of cure. But the position of those who would prohibit experiments on animals, even whilst they admit their value, is hard to understand. Suppose one of these sensitive gentlemen, on a lonely Scotch moor, had the misfortune to shatter his own leg instead of a grouse's, would he object to the messenger for medical aid lashing and spurring his horse up hill and down at a frantic pace? And if the animal dropped dead at the doctor's door, I suspect he would consider the animal's sufferings of less moment than his own. From all time man has made use of the lower animals for his own ends, and we recognize no *cruelty* nor immorality in depriving a horse of his freedom and of his sex in breaking the spirit Nature has endowed him with, and then setting him to drudge day after day, thereby shortening his life one-half. We do not blame a man for whipping on a lazy beast, nor for thrashing the dog that stole the family joint, and I have yet to hear of an anti-vivisection mouse-trap that chloroforms its victim before crushing its life out; and if this is looked on as a natural and proper thing, by what logic is the physiologist condemned who seeks to save life and alleviate suffering at the cost of a few pangs to the lower animals? To argue that they suffer in the same degree as we do is absurd. I remember long ago setting the broken leg of a favorite cat, and the animal purring during the operation. On another occasion a rabbit, from whose head I removed a large tumor, munched lettuce heartily immediately after.

The solo sung by a human being during the setting of a fracture is in quite another key, nor would one be ready for a salad immediately after being trephined. Even savages do not suffer in the same degree as civilized men. The fact that the more developed and highly strung a nervous system is the more acutely does its possessor feel pain has totally escaped the notice of the anti-vivisectionist.

If high and low suffered alike, the boiling of a

live lobster, the swallowing of a live oyster, or the gentle art of angling, would be devilish beyond description.

But beyond balking the physiologist the anti-vivisection party do not seem to have much interest in the lower animals. No protest seems to be raised when they suffer in the interest of sport. One prominent member of the society excuses sport because there is courage and danger in it, and the animals "die game."

When two vagrants were brought before a magistrate not long since for grossly ill-treating a performing bear, they had to be discharged because the bear was not a domestic animal, and was entitled to no protection save from the physiologist.

Give ear, then, Bill Sykes and Co.; it was lawful for *you* to flay, burn, or boil wild animals at your pleasure *as long as you did it to gratify your devilish instincts*, but you, O humane and educated savant! make but one unlicensed injection into a frog and there is a society at hand to see fine or imprisonment inflicted upon you for the sin of trying to benefit your fellows.

From this branding of the physiologist as a more cruel and debased character than the commonplace ruffian, one would expect to find that vivisection in England had reached the highest point of cruelty. Yet what are the facts! Taking the average of experiments on animals year by year, 75 per cent. of these are painless, 20 per cent. involve no greater suffering than the prick of a needle, whilst only one per cent. entail as much suffering as would ensue from the performance of any ordinary surgical operation upon the animal.

Operations, and painful operations, such as castration, are daily performed on the brute creation without chloroform, and for far less weighty reasons than those which sway the physiologist, and yet who cries shame?

The aim of the anti-vivisection party is to suppress this species of scientific research in *Great Britain*, yet in all the long, wearisome tirades that I have heard or read, I have failed to find one instance where any authentic charge of barbarity has been brought against any British investigator. In a furious blast against vivisection delivered not long since by the Hon. Bernard Coleridge in the House of Commons, the honorable member, after denouncing the abominable cruelties practised in this country, has to go as far as Strasburg to find a scapegoat in the person of Goltz. The Secretary of State, in reply, said: "The honorable and learned member has suppressed entirely the fact that under the Vivisection Act the things he mentions are *impossible in this country*." That the Hon. Henry Matthews is no mere partizan is evidenced by another remark of his: "I am not myself enamoured of this system of physical research." (Hansard, cccxxxv., 878-887). If the orators of the Total Abolition party had the honesty to tell their hearers that vivisection in this country must be performed under a license from the Secretary of State; that its object must be to save life, alleviate suffering, or teach important lessons in physiology; that all experiments must be conducted in licensed rooms and not in secret; that no public exhibitions are allowed; that all experiments must be open to the Government inspector, and that a report of all such experiments is laid before the authorities—then I imagine the public would be apt to inquire of them what all their fuss was about.

The justice of the crusade against vivisection can be further estimated by statements of some of the crusaders. One of these, the Rev. Noble Scott, writes me as follows: "I agree with you that our British medical men are, with very few exceptions, true gentlemen. . . . Even those who have vivisected have mostly done so in the humanest manner possible."

In his evidence before the Royal Commission in 1876, Mr. Colam said he did not know a single instance of wanton cruelty on the part of British scientists, that he believed anæsthetics were used wherever possible, and that any cases of inhuman conduct were exceptional and rare, and not chargeable upon the profession at large.

Many others of the more liberal minded of the party have not hesitated to testify in the same way, and have not been backward in condemning the extravagant language of the more violent partizans.

The gross untruths and insults hurled about by these latter do not form a very wholesome atmosphere for the Anti-Vivisection Society to exist in, and yet in the clearer air of plain truths and undeniable facts the anti-vivisectionist exhibits more of the ridiculous than of the sublime, more of Don Quixote than of King Arthur.

With some of the ultra-orthodox members of the party, dogmatism and not humanity may be the leading string. Physiology has of late brought strange facts to light that smell of heresy. Physiology must be gagged if possible. A pamphlet by some of these weak-kneed enthusiasts sets forth the fact that as sin and death arose in the beginning by eating of the tree of knowledge, so the continued nibbling at it will be productive of greater sin, and the moral is, abolish vivisection.

There is one test by which our opponents can show their sincerity and heroism. If vivisection and its results be accursed let them refuse to avail themselves in time of sickness of the remedies worked out by experiments on animals. I have suggested this on one or two occasions, but it has made no converts.

To the members of the Anti-Vivisection Society, therefore, I commend the principles of honest Davie Deans—"If he didna satisfy me that he had a right sense of the right hand and left hand defections of the day, not a goutte of his physic should gang through my father's son."—*Hosp. Gaz.*

ON PEROXIDE OF HYDROGEN: A PHYSICAL, MEDICAL RESEARCH.

Peroxide of hydrogen was discovered and described in the year 1818 by the illustrious French chemist, Baron Thenard. In 1860 I made my first report to the Medical Society of London, and in 1862, I made a second report on the medicinal use of the peroxide. I had by this time used it in two hundred and twenty-three cases of disease, including phthisis, diabetes, anæmia, sub-acute and chronic rheumatism, strumous enlargement of the cervical glands, mesenteric disease, pertussis, chronic bronchitis, chronic laryngitis, mitral disease and dyspepsia. In epitome of results I drew the conclusions; That in diabetes the peroxide reduced the specific gravity of the urine, whilst it rather increased the quantity: That in chronic and sub-acute rheumatism it afforded relief; That in valvular disease of the heart with pulmonary congestion it gave relief to the dyspnœa; That in mesenteric disease and in jaundice it caused an improvement in the digestion; That in pertussis its effect for good was very remarkable, since it cut short the paroxysms of cough, and seemed decidedly to shorten the period of the disease; That in chronic bronchitis it lessened the dyspœna, and rendered the expectorated matter less tenacious; That in chronic laryngitis it gave pain on being swallowed, and did not appear to be useful; That in anæmia it did not of itself render any service, but favored the good effect of iron; That in the first stage of phthisis it caused improvement in the digestion, and in the latter stages gave unquestionable and even wonderful relief to the breathlessness and oppression, acting, in fact, like an opiate without narcotism, and assisting oxidation.

In the discussion which followed upon the reading of this paper I was warmly supported in several points by Drs. Gibbon, Symes, Thompson, and Gibb, all of whom had been prescribing the peroxide on the suggestion, made in my previous paper of 1860. Dr. Gibb bore special testimony to its value in affording relief during the last stage of phthisis, for which I had recommended it in the case of a member of his own family. But the most important new observation I had to communicate to the Society in 1862 was that in free and frequently repeated doses the peroxide could be made to produce a modified salivation, a fact which led to two suggestions: firstly, that in the use of mercurial and iodide preparations it was the chlorine or iodine in them which caused the ptyalism; secondly, that the peroxide would oe a good substitute for mercury and the iodides in the treatment of syphilis.

Hydrogen peroxide must be looked upon as water containing so many atmospheres of ozonized oxygen. It is an ozonized oxygen atmosphere in solution. It is not, however, a mere mixture, but a peculiar chemical compound. The oxygen can be made to accumulate, volume by volume, until the volume of water, say as much as would fill a pint measure, can rise to ten, twenty, thirty, and some say even a hundred and twenty pints of oxygen, before complete saturation is reached and a volatile body is formed. We hold, therefore, in a specimen of the peroxide, condensed oxygen combined either with the hydrogen of the water, or with the oxygen of the water, or with the elements HO acting as a radical. There is here not much difference, at first sight, from what is common in combinations where there is accumulation of one element on another; as, for example, in the combination of carbon with one equivalent of oxygen in carbon monoxide, and carbon with two equivalents of oxygen in carbon dioxide. But now comes a distinction. The combination of the added oxygen in hydrogen peroxide is stable in the presence of some substances, unstable and easily evolved in the presence of others. Some substances, inorganic or organic, when added to the solution are neutral; other substances, inorganic or organic, evolve the oxygen and are themselves unchanged; a third kind evolve the oxygen, and with that some of their own contained oxygen; a fourth kind absorb the oxygen into themselves.

To an animal deep under chloroform I introduced the peroxide solution, directly, by injecting it through a fine needle into the lung structure itself, puncturing through an intercostal space. This caused an oxygen diffusion into the lung, during which the animal lived, in one instance for five minutes, with the respirationentirely cut off.

In an experiment on the muscles of an animal under choloform I repeated what I had already done for removing muscular rigidity, but in a different way. Ammonia injected into a living muscle excites contraction tetanic in character. When this had been produced, the peroxide solution warmed to the temperature of 100° Fahr., was injected slowly, with the effect of producing relaxation. In a further trial the muscles of a narcotized animal were brought into contraction by a Faradic current, and in this state the muscles were injected with the solution at blood temperatures, with the effect of overcoming the resistance produced by the current, and of relaxing the muscles until the tension was increased.

Purulent matter possesses strongly the power of liberating oxygen from the peroxide, and probably the white corpusoles of the blood do the same. It may also be that the minute organisms called bacteria have the like power. In all cases the starting of the process is one of infinite subdivision of particular kinds of matter having a common property, and we may expect that in due time the common mode of their action as reducers of such

compound bodies as peroxide of hydrogen, will be discovered. This is one of the most important problems for solution in the whole range of medical science and art, because every condition of disease in its acute form, involving organic change of structure, depends primarily on the decomposition of oxides of the tissues.

In testing the action of the peroxide on natural organic structures which liberate oxygen from it, I observed, as related above, that the fluid oxygen causes, in some instances, decomposition of the organic matter. The same fact was observed with abnormal organic material like pus. When pus is placed for observation under the microscope, mixed with the neutral peroxide solution, the phenomena are most interesting. The pus corpuscles are, for a time, driven about as if they were alive. They move in all directions, assume ovoid shapes as they squeeze through masses that may obstruct their course, and after many variations of form and movement come to a standstill, like amorphous matter, dead, so to speak, and entirely disorganized. This effect of the peroxide in destroying pus cells led me very early in these researches to use the solution for the treatment of suppurating surfaces, and with great success.

THE WORK OF LEUCOCYTES.

A study of the relation of bacteria to disease is of great interest, and sheds abundant light, not only on the nature of specific diseases, but also on that of inflammation. In "Evolution and Disease," J. Bland Sutton reviews the leading facts connected with the evolution of the inflammatory process as manifested by a complex organism. Most complex organisms are pervaded by a corpusculated fluid, which may circulate throughout the organism by traversing lacunar spaces, or by means of narrow tubular passages possessing distinct walls. This fluid serves as a living medium to all parts of an organism. The red blood-corpuscles carry oxygen, as is well known, and the white fulfil some very extraordinary functions. Should a portion of an animal die, leucocytes attack it, and if it be small, will cluster round and, by a process of intra-cellular digestion, devour it. If the part to be removed is large, leucocytes effect a separation between it and the living body. Not only are dead or damaged portions of tissue thus disposed of, but useless parts—such as the tails and gills of tadpoles, remains of larval organs, and the tails of ascidians—are slowly removed by the same process. Animal tissues are incapable of resisting an attack of leucocytes. An examination of the milk-teeth of children or puppies at the time they are shed, will attest the digestive powers of these cells. An ordinary magnifying glass shows the irregular edge of the crown to be full of bays and recesses; and the microscope reveals the presence in these spaces of leucocytes, which during life were busily engaged in destroying the fang of the tooth and thus causing it to fall out. Small pieces of clean sponge introduced into animal tissues disappear in a few days; while indigestible objects—glass, needle, or a fragment of metal—are surrounded by a large number of leucocytes that are soon transformed into neutral tissue which isolates the intruders from neighboring parts. Should the intruded body contain particles of dirt offensive to these cells, their action is intensified to a degree highly disastrous, for they die in the conflict, and in a few hours the foreign substance is surrounded by a fluid—pus—containing the dead cells. When this fluid is evacuated, the cause of the disturbance often escapes.

Leucocytes, in their behavior to foreign bodies, may be compared to bees. When the offender is small it is quickly stung to death and cast out. When large, it is deprived of life and rendered innocuous by a covering of wax. Leucocytes also attack pathogenetic bacteria, and attempt to destroy them. This amœbic warfare may be described from attacks actually witnessed by Metschnikoff in the water-flea *Daphnia*. Spores gained an entrance into the body of the crustacean, germinated, and were dispersed by the blood over the body (in daphnia the blood circulates in lacunar spaces), and deposited where the blood moves slowest, viz., in the cephalic and hinder portions of the mantle cavity. In these places heaps of conidia collect. The leucocytes are not idle. They attack and devour the conidia, take them into their interior, and digest them. If a conidium is too much for one cell, others join it, from a giant cell, and thus struggle with the invader. Should the leucocytes overcome the spores, the daphnia lives. If not, the conidia overrun the crustacean and death is the result.

Similar processes in animals more highly organized take place, the defending power of leucocytes being well illustrated in avian tuberculosis. Tuberculosis is unfortunately widespread in man; but in birds, especially those that live on grain, it is more common than in human beings. The liver and intestines of birds that have met their death from this cause, present numerous pale-yellow, rounded nodules, the centres of the larger ones containing pus. The smaller ones are homogeneous, containing in the centre small circular cells with larger ones—giant-cells—lodged among them; outside these a layer of smaller cells; and, lastly, a layer of fibrous tissue. The microscope reveals minute bacilli clustered in the centre of the mass and occupying the interior of the cells, especially the giant-cells. In nodules of moderate size, caseous material surrounded by a zone of cells containing bacilli, occupies the centre. Ad acent

nodules may coalesce and thus produce large masses. Blood-vessels connected with the nodules frequently present clusters of bacilli in their interior. The author (Sutton) is convinced that these bacilli, from whatever source arising, are introduced into the alimentary canal and find their way into the walls of the intestine. Here they are attacked by the leucocytes, which surround, ingest, and destroy them. The bacilli may be too numerous for the leucocytes, and the point where they gain entrance into the tissues be transformed into a battle-field. Large numbers of other leucocytes quickly reinforce their comrades. Many of these die, others fuse and form giant-cells. The dead leucocytes form pus and give rise to the caseous centre in the nodules. From these nodules the bacilli are conveyed by blood-vessels, or are even carried away by the leucocytes—a giant cell sometimes containing fifty bacilli—and initiate new struggles in distant parts. When bodily conditions are favorable, bacilli multiply very rapidly and overrun the whole system, nodules arising in the liver, lungs, brain and skin. Function is interfered with and death results. In addition to local troubles, bacteria produce general disturbances, one of the most important being fever.

The behavior of leucocytes to pathogenic bacteria constitutes the essence of the inflammatory process. This is essentially a local struggle between irritants and the white cells of the blood. When the whole of the blood is engaged in the struggle—as in ague, pyæmia, anthrax—we have general inflammation or fever. The different varieties of fever depend on the habits of the bacteria, some being virulent and irritating to the tissues, and others slow in attaining maturity. Inflammation takes place in plants; for example, the gall on leaves due to the deposition of eggs in their interstices by insects. Each insect produces in this way a different kind of gall. One leaf may thus present at the same time several varieties of inflammation. It simplifies our notions of morbid processes to find that the phenomena known as the repair of wounds, inflammation, and fever, are manifestations of the same process by which a child loses its milk-teeth, the tadpole its tail, or the stag its antlers, rather than to look upon such conditions as the result of some special law.—*Medical Record.*

EARLY STAGE OF DISEASE OF THE SPINE IN CHILDREN.

It is a simple matter on paper, but not always so in actual practice, to say whether a child has or has not early vertebral ostitis. Those who have seen most of spinal disease in children will be the least likely to dispute this statement. In a doubtful case the child should at once be placed flat in bed and kept flat until all equivocal symptoms have passed off. The lecturer had met with instances in which the practitioner, though suspecting the invasion of ostitis, had allowed the child to run about, because the existing symptoms were not sufficiently obvious to enable him to form a positive diagnosis. Attention was directed to two methods of examining for spinal caries which were as widely adopted as they were antiquated and unsatisfactory. The first was that of pressing upon the spinous processes from the nape of the neck downwards. The disease being in the body of the vertebæ, pressure upon the tip of the spinous process was hardly likely to give trustworthy information. Often, indeed, there was neither pain nor tenderness in the affected region. The second method is that of applying a hot sponge along the spine. Any child would be apt to wince under this test, even though its spine were healthy. On the other hand, if its spine did happen to be diseased it would by no means follow that the hot sponge would give information of that fact.

Though there is often no local pain with spinal ostitis, there are often complaints of symmetrical peripheral pains which are too frequently ascribed to "rheumatism' by those who do not trouble to seek out their cause.

Before proceeding to examine the child, it is well to question the parents as to the complaints of aches or pains, and to notice how the child holds himself. Probably he will be standing unusually straight, with his head and shoulders somewhat thrown back in order to keep himself in a position of stable equilibrium, the centre of gravity having been advanced by the collapse of the softened vertebræ. As regards pain it may probably have been complained of in the back. But very possibly there may have been no complaint of that nature, the child having suffered only from peripheral neuralgias. These distant pains are usually symmetrical, and it is strange how the very terminal filaments of the sensory nerves are those chiefly concerned in it. Thus in cervical caries there may be pains in each side of the neck; or, the third and fourth nerves being implicated, over the pectoral regions and shoulders. The lecturer then brought in a child directing attention to its stiff and straight pose, and to the fact that it supported itself by holding on by his mother's dress. On being questioned, the mother said that the child's constant complaint was of "headache in the chest." Intercostal pains which were carelessly ascribed to "pleurodynia"—whatever that was—or to "rheumatism," were often the result of vertebral disease. So also with "belly-aches," pains in the hips, thighs, legs and feet; in the arms, elbows, and hands.

Several naked children with various spinal affections were then brought in. Attention was called

to the fact that straightness of the spine in the cervical and lumbar region was as characteristic of vertebral caries as was the angular projection which so quickly appears in the case of caries of the dorsal vertebræ.

After all, stiffness was the most important sign of early spinal disease. Two boys of about the same age were placed side by side upon the floor; one of them had dorsi lumbar disease whilst the other had a sound spine. The latter could put his head between his knees, his back assuming a beautiful, convex sweep. The other boy could not bend down at all. Two children were then brought in whose projecting spinous processes offered strong suggestion of vertebral caries. Their back-bones could, however, be freely bent and turned in every direction, and were manifestly destitute of inflammatory trouble. Their mothers said, moreover, that they had not complained of pains, and that they could run about and play with other children without showing unusual fatigue.

As regarded the treatment of the early stages of spinal disease, Mr. Owen summed up his advice in one word, REST—absolute and continuous rest. The child should be placed on a narrow horse-hair mattress with the head securely steadied between very large sand bags, only a small, flat cushion or pillow being allowed beneath the nape of the neck. When the pains had become a matter of almost "ancient history"; when it was certain that no abscess was forming, and when, with the lapse of many months, it might be considered that all tubercular inflammation—and these cases are always tubercular—had passed away, some kind of rigid support might be employed. To substitute a plaster of Paris or a poro-plastic splint, however, for absolute rest in the horizontal posture, was one of the commoniest errors of the present time in connection with the treatment of early spinal disease.—Edwin Owen, F.R.C.S. *in Med. Press.*

CHLOROFORM OR ETHER?

The *British Medical Journal* has performed a signal service to the Hyderabad Commission in placing before the profession Dr. Julliard's views on chloroform and ether. The leading article in the *Journal* of April 25th, 1891, is incomplete, however, and ought to have included the London statistics so opportunely brought forward by Mr. Roger Williams in the *Lancet* of February 8th, 1890.

According to Dr. Julliard's statistics, deaths from chloroform amount to 1 in 3,258, and from ether to 1 in 14,987 administrations. According to Mr. Roger Williams, the statistics of the London hospitals show that deaths from chloroform amount to 1 in 1,236, and from ether to 1 in 2,754 administrations. On the other hand, the statistics of chloroform administered on Syme's principles form an unbroken record of inhalations from 1848 to 1891 without a death. The *British Medical Journal* regards Dr. Julliard's figures as "a most valuable statistical summary," but this summary would obviously be much more useful if it were accompanied by a description of the method of administration pursued in all the cases from which it is compiled. There are two distinct methods of chloroform administration in vogue. In one the pulse, as well as the respiration, is taken as a guide; in the other the pulse is never under any circumstances taken as a guide; and it is manifestly unreasonable to compare the risks of ether and chlorform without stating with regard to chloroform which of these methods is employed. The importance of this point lies in the fact that there is not one case of death from chloroform recorded, in which it was proved that the pulse has never been taken as a guide, no death from chloroform has ever occurred. It should be stated that in Syme's practice, as in my own, the anæsthetic was always administered by students and not by specialists. *If the pulse is affected under chloroform it indicates chloroform poisoning either direct or through abnormal respiration. All the chloroformist has to produce is harmless anæthesia with regular breathing, and without poisoning, and of this the pulse can never be any test whatever; it is, therefore, positively dangerous and useless to take it as a guide.* The following table places the available figures in a most striking light:

Mortality Statistics of Chloroform and Ether.

Anæsthetic Employed	Source of Statistics.	Period.	Number of Deaths to Administration.
Chloroform	Julliard	Not stated	1 to 3,258
Ether . .	Julliard	"	" 14,987
Chloroform	St. Bartholomew's Hospital (Roger Williams)	10 years, 1878 to 1887	" 1,236
Ether . .	" " "	"	" 2,754
Chloroform	Syme and Lawrie .	43 years	No death.

If statistics are of any value, this table ought to carry conviction with it, because it shows clearly that chloroform administered on Syme's principles is even less dangerous than ether administered in accordance with the most approved methods. But the Hyderabad Commission has no desire to institute further comparisons between them. All we say is, let anybody use ether who chooses, but if chloroform is to be employed, let it be given in the right way. Surgery cannot yet do without chloroform, and the only way to give it with invariable safety is to be guided, as Syme was, not by the circulation, but entirely by the respiration. What Dr. Julliard says about ether I can say, *mutatis mutandis*, about coloroform. During fourteen out of the seventeen months that have elapsed since the Hyderabad Commission demonstrated that the key to the safe administration of

chloroform consists in regular breathing, I have given chloroform several times daily. Not only have I not had any deaths, but I have met with no accident of any kind. I have not once had to do artificial respiration or pull forward the tongue. Neither have I had to interrupt an operation in order to ward off any accident due to chloroformisation. There is no element whatever either of luck or of chance about these results. Any surgeon can administer chloroform without risk who will take the trouble to assure himself that the patient's breathing is normal and regular throughout the administration, and to stop the inhalation in good time, that is, directly full anæsthesia is produced. Statistics such as those of Dr. Julliard and Mr. Roger Williams, which are intended to show the danger of chloroform, are, as my table proves, susceptible of a very different interpretation. If they help to prove anything, it is that no anæsthetic is absolutely safe except chloroform administered on Syme's principles, and the more proof we have of this kind the better.—Edward Lawrie, M.B., in *Brit. Med. Jour.*

THE THERAPEUTIC USES OF OXALIC ACID.

Among the many remedies recommended in late years for amenorrhœa, the one that has proved most valuable in my hands, is oxalic acid, as suggested by Dr. F. Paulet.

It has none of the objectionable, and nearly all of the valuable, qualities possessed by the other emmenagogues. It is not unpalatable, non-irratating to the stomach in medicinal doses, certain in its action, has no oxytocic properties, and, more valuable still, it may be used in all cases of amenorrhœa where an emmenagogue is applicable. I have used it for four years in all such cases with the best possible results.

It was while using the acid in the above mentioned cases that I discovered another valuable use of the drug, which I have never seen referred to, and that is its sedative action in acute cystitis.

The following are a few of the many cases in which I used it, and I have yet to record the first failure.

Case I.—Miss C., aged 26. Had once been under homœpathic treatment two or three years for spondylitis and uterine prolapse. Had developed, several months previous to my first visit, a vesical inflammation, primarily through the continued use of cantharidic blisters, without proper precautions. This condition was aggravated and kept up by the prolapsed condition of the uterus. For the cystitis I gave her the following:

℞.—Acid. oxalic., ... gr. xvj.
Syr. aurantii cor., ... ℥j.
Aquæ pluv., . . . q. s. ℥iv.
Sig.—Teaspoonful every four hours.

The result was all that could be desired—the acute symptoms all subsided immediately, and a few days saw her completely free from the vesical irritation.

Case II.—Mrs. A., widow, aged 75. She has had several attacks of cystitis. Treated her with hyoscyamus, triticum repens, corn-silk, and pichi at different times, with rather unsatisfactory results, the inflammation continuing two or three weeks at a time. When another attack occurred, I gave the above prescription. The result was magical. In less than twenty-fours the pain, tenesmus, and frequent desire to micturate had all disappeared, and, after two or three days, no evidence of the trouble remained.

Case III.—A. B., aged 18. He retained his urine several hours after a desire to evacuate the bladder occurred. The distension was so great that he had much difficulty in emptying the bladder, when he did make the attempt. The result was an attack of acute cystitis. The pain and tenusmus were great, and the desire to urinate occured every fifteen or twenty minutes. Gave the acid, and in two days he was completely cured.

Case IV.—Mrs. J., aged 60, married. Complained of frequent desire to urinate, accompanied with pain and straining. Gave the acid, and directed her to avoid straining, etc. Found her better next day. Three weeks later found her worse than ever. The tenusmus was almost constant, and the urine dribbled away most of the time. Her limbs were swollen, and nephritis was suspected, though no albumen was found, but the microscope afterwards revealed casts in abundance. I again gave the acid, and within three days all pain and straining had disappeared, although some soreness remained several days longer. She was able to retain the urine several hours, and had no further trouble with the bladder.

The above cases have been selected to show the different causes that produced the cystitis in which the acid was used. The causes might be multiplied, all showing the same marked results.

The action of the remedy is rapid and the results certain, and it may be used in all cases of acute cystitis, from whatever cause, care being taken to use either rain or distilled water, to prevent the formation of oxalate of lime.—A. W. Marsh, M.D., in *Coll. and Clin. Rec.*

OBSTRUCTION OF THE BOWELS.

Dr. E. W. Mitchell, of Cincinnati, reports two cases of successful treatment of obstruction by means of olive oil, this method of treatment being the result of a suggestion of Prof. Langdom. One of the patients, a man fifty-three years old, had had an operation for strangulated inguinal hernia on the left side, twenty months previously. When

seen for his present trouble, he had not been well for a day; there had been severe colicky pains and vomiting after each attempt to take food. Enemata were given on this and the following day with little result. Morphine was given, and large enemata through a rectal tube, introduced as far as possible, produced no effect. Almost two quarts of dirty fluid was withdrawn through a stomach tube. Two ounces of sweet oil were ordered to be taken every hour. Tympanites during the afternoon and early evening had rapidly increased. There was much prostration, no nourishment having been retained. During the night, half a pint of oil was taken. In the morning there was less prostration; there had been a small fluid passage.

An enema, now administered through a rectal tube (English gum catheter, No. 16) returned slightly discolored, and containing a trace of oil. There was a recurrence of vomiting, but the oil was continued. About noon the bowels began to move, and several fluid stools were passed during the following night. On the next day the stools became formed and contained pus in small quantities. The case was probably one of fæcal impaction—there were no evidences of typhlitis or perityphlitis

The second case was that of a young man twenty-two years old. The bowels had not moved for forty-eight hours, and he had been suffering from tormina and vomiting. Large doses of cathartics had already been taken. Thorough examination failed to find any evidence as to the point of obstruction; the hernial openings were clear, there was no point of tenderness, no tumor, the abdomen was quite typanitic. He was treated by sulphate of magnesia, repeated clysters through a rectal tube introduced as far as possible into the bowel, and sufficient morphine to control extreme pain. This treatment was continued for two days with no benefit, the tympanites increasing, vomiting becoming stercoraceous, and the patient much prostrated. The administration of sweet oil was then begun; a pint was taken within three hours, most of which was retained, although he had been vomiting everything. Three hours after beginning the bowels began to move, and a good recovery ensued.

Dr. Langdon mentioned in the same journal eight cases where relief had been obtained from large doses of olive oil.—*Cincinnati Lancet-Clinic.*

SOME RECENT STATEMENTS CONCERNING DIPHTHERIA.

Upon the subject of diphtheria there is no greater living authority than Löffler; even Klebs, with all his discoveries, must take second place. Such being the acknowledged position of the former investigator, the synopsis of what he knows of diphtheria must prove of great interest. They are given in twelve paragraphs in the *Pacific Record*, translated from *Correspondenz Blatz fuer Schweitzer Aerzte*, as follows:

1. The cause of diphtheria is the diphtheria bacillus. It is found in the excretions of the diseased mucous membranes.

2. The bacillus is expelled with the excretions. It may be deposited on anything in the neighborhood of the patient.

3. Diphtheritic patients contain bacilli capable of infection as long as there is the least trace of diseased tegument in existence, and even for several days after their disappearance.

4. Persons affected with diphtheria should be vigorously isolated as long as there are any bacilli present in their excretions. Children who have been affected with diphtheria should be kept removed from school for at least four weeks.

5. The bacilli of diphtheria preserve their vitality for four or five months in particles of membrane in dry condition. For this reason, all objects which may have come into contact with the excretions of diphtheritics, such as linen, bedding, drinking and eating utensils, clothing of the nurses, etc, should be disinfected by boiling water, or treatment with water vapor of 100° C. Rooms which have been occupied by diphtheritics should be disinfected with the same carefulness. The flooring should be washed repeatedly with hot sublimate solution (1 : 1000), walls and furniture should be rubbed with bread.

6. Investigations on the vitality of diphtheria bacilli in moist condition are not concluded yet. Possibly these bacilli preserve their vitality, when in moist condition, even longer than in dry condition. Humid and dark dwellings seem to be especially favorable to the preservation of diphtheritic virus. Such dwellings, therefore, have to be subjected to sanitary measures, especially in view of their thorough drying and accessibility of light and air. In moving from one house to another, great care should be taken for thorough disinfection of dwellings which have been infected.

7. Diphtheria bacilli will continue to thrive outside the body at temperature of 20° C. They grow very well in milk. For this reason the milk trade should be subjected to careful supervision. The sale of milk from dairies where cases of diphtheria have been located, should be forbidden.

8. The diphtheria-like diseases of the numerous species of animals, of pigeons, chickens, calves, hogs, are not connected with the diphtheria bacillus of man. For this reason the diphtheria-like diseases of animals are not to be dreaded as sources of diphtheria in man.

9. Klein's statements on etiologic identity of the disease observed by him in cats, with diphth-

eria in man, have no demonstrative value as yet; they require further confirmation.

10. Lesions of the mucous membranes of the air passages favor attachment of the diptheritic virus, while susceptible individuals may be attacked by the disease without such lesions.

11. During prevalence of diphtheria peculiar care should be bestowed on keeping the oral, nasal and guttural cavities of children perfectly clean. Besides this, prophylactic rinsings of the mouth and garglings with aromatic waters or weak sublimate solutions (1 : 10,000) are recommended for children.

12. An influence of determined meteorological elements favoring the spreading of diphtheria has failed until now to be ascertained in a positive way.—*Kansas City Medical Index.*

ARSENIC AS A DRUG.—There are certain forms of skin disease against which arsenic appears to possess specific power; for instance, pemphigus diutinus or persisting pemphigus and allied disease. In connection with the liberal administration of this drug I have had repeated opportunities of observing its effects upon the palms and soles. It makes these itch, burn and prespire. In the instance of the soles, the profuse perspiration has on several occasions caused the epidermis to peel. In the treatment of common psoriases, although the effect of arsenic is quite as definite and certain as in pemphigus, it is not nearly so immediately curative. In the large majority of cases it will in the end, if well pushed, cause the eruption to disappear, the patches sometimes becoming congested and irritable. It seldom, however, brings about a complete cure. I believe that both its efficiency and its safety are in ratio with the youth of the patient. My experience as regards the effect of arsenic in lichen planus has not been uniform; some cases improving, and others doing better under tartar emetic. In regard to the value of arsenic in eruptions of the eczematous type, my impression is that if given in anything like full doses it usually makes the eruption worse. In cases of common acne, sycosis (non parasitic), and various other chronic affections of the skin, I often add small doses of arsenic to the other remedies used. Arsenic is supposed to brighten the complexion, make the skin more transparent, and give glossiness to the hair. If it really affects this, which I have doubt, it does so only when used sparingly. The effect of the drug as a direct tonic I think is due to and depends on the smallness of the dose. In elderly persons, unless the disease imperatively demands it, I never prescribe this drug. Very few persons have an idiosyncrasy for arsenic, and the young bear full doses well. Arsenic is an undoubted cause of peripheral neuritis, and it is noted by Christison that local and unsymmetrical forms of paralysis are caused by its continued use. During its medicinal use numbness and tinglings are frequently observed. Herpes zoster is also sometimes caused by arsenic. Neilsen, of Copenhagen, found that in 520 cases of psoriasis in which arsenic was prescribed 18 cases had herpes. As to the effect of arsenic on the general health when administered during long periods, my impression is that when given in small doses its effects are inappreciable, and there is no danger of a cumulative influence. The toxic symptoms of arsenic when given medicinally are numbness, and tingling of the palms and soles, loss of flesh, irritation of the conjunctiva, diarrhœa and gastric symptoms, and sometimes extreme irritation of the bladder.

A number of cases have been noted where arsenic has caused death, when used in large doses for long periods of time, with paraplegic symptoms. The effect of arsenic upon the skin in persons previously in health are that (supposing the doses to be large) the skin becomes dry, harsh, brown and muddy looking, though there may be perspiration on the palms and soles. In extreme cases scaly patches may form, and in some parts, in addition to dryness, corns may form, very rarely degenerating into epithelial cancer. Arsenic will also cure recurrent herpes. Whilst I think that our clinical knowledge of this powerful and most important drug has much advanced during the last twenty-five years, we cannot claim to have made any discovery as to its mode of action. We know that it will cure some diseases, and cause others; that it has some peculiar affinity for nerve tissue, and some peculiar influence upon nerve function, but further than this we cannot go. Recent observations leave us the creed that while we may, as heretofore, avail ourselves freely of its services we must closely watch its effect, and be prepared, if need be, to forbid its use.—Hutchinson, *British Med. Jour.*

THE PART PLAYED BY MICROBES IN SUPPURATION.—In the course of a discussion at the recent French Congress of Surgery on the different forms of suppuration examined from bacteriological and clinical points of view, the following conclusions were laid down by M. Verneuil (*Revue de Chirurgie*, May): (1) microbes are necessary for pyogenesis, pus is the function of microbes; (2) there are many known pyogenic microbes, but the number of these has not yet been made out; (3) some are constantly pyogenic and nothing more, others seldom produce pus and are pre-eminently infective; (4) the centres of suppuration are in some instances, mono-microbic, in others poly-microbic; (5) in poly-microbic purulent centres there are three kinds of association—one of different agents that are all invariably pyogenic, another of invariable with occasional agents of suppuration, and

a third of pyogenic with non-pyogenic agents; (6) a purulent centre originally mono-microbic may become poly-microbic; (7) a substitution of one kind of microbe for another kind may take place in a centre of suppuration; (8) the collection of pus may become a microbic, the pyogenic agent may disappear and the pus become sterile; (9) microbes which engender pus prevade the whole region of suppuration; (10) pyogenic microbes do not always excite suppuration nor at the time of invasion; (11) the vitality of pyogenic microbes varies in the different forms—some disappear very quickly, others retain their vitality for almost indefinite periods; (12) suppuration may in every instance be regarded as due to the presence of bacteria; (13) the specificity of microbic agents being assumed, it becomes necessary to make out the specific action of each form of microbe. From these etiological conclusions one may readily deduce certain therapeutical indications: (1) in cases of open suppuration, as, for instance, unhealed wounds and carbuncle, the treatment should consist in prolonged antiseptic baths, and in the application of antiseptic powders; (2) if the suppuration be intradermic, as in lymphangitis and erysipelas, the application of antiseptic powders will suffice; (3) if the suppuration be deep seated, one must penetrate into the collection in order to evacuate the pus and to sterilise it. Free incisions are useless; all that is necessary is to let out the pus through a small incision, and to replace it by a microbe-killing agent.

ON THE RELIEF OF PELVIC AND ABDOMINAL PAIN BY HOT COLON DOUCHES.—The writer has resorted to this procedure for various painful affections, such as renal colic, ovarian neuralgia, and inflammation of the broad ligament, severe pelvic pain, dysmenorrhœa, and one case of what appeared to be hepatic colic.

The proper method of using the remedy is as follows: The patient is to lie on the left side, with the left arm under the back, legs partly drawn up, hips on a pillow or folded blanket, the chest low; in short, in the Sims position. This position allows the patient to administer the injection by the use of the right hand. It is always better, however, to have an attendant administer the injection if possible. If an attendant gives it, the patient might better lie directly on the face, with a folded blanket or pillow under the thighs. The water is to be of a temperature not more than 112° F. nor less than 106° F. From a pint to two quarts of the hot liquid should be slowly injected, and retained for a few minutes. If there are fæces in the rectum, as is usuall, the case, the injection and the fæces will be quickly ejected. Then at once have the patient lie down, and repeat the hot injection, using a larger quantity the second time. This will be retained longer, and will almost certainly relieve the pain. When this is expelled the patient should lie down again, and about a pint of hot water should be injected; this will be retained if the patient lies quiet, and it will be discharged from the system through the kidneys. If the patient is at all weak, it is wise to administer a stimulant before giving the injections.—W. E. Forrest, in *Med. Record.*

ACUTE SYNOVITIS.—Dr. Owen (*Practitioner*) describes nine cases of traumatic effusion into the knee-joint, treated by tapping. In some instances the aspirator was employed, but in others he usep a hydrocele canula. Strict asepticism was enjoined, and care taken to prevent the access of air to the joint. He had never known trouble to follow, and employed tapping as a routine treatmeut in patellar fractures and simple distention. As a rule the puncture is made to one side of the patella. When withdrawing the canula the track is obliterated by firm pressure with the finger. The skin puncture is covered with a scrap of lint dipped in collodion, or by a little pad of dry wool. The knee, together with the upper half of the leg and the lower half of the thigh, is then enclosed in lateral splints of house-flannel and plaster of Paris. The limb is fixed in the extended position, the foot being slightly raised. The firm pressure which is made around the joint is comforting, and it effectually prevents further effusion into the synovial membrane. "Having watched the effect of this method of treatment, I can honestly say that, should I have the bad luck to be the subject of acute traumatic hemarthrosis or sero synovial effusion of the knee, I should most certainly have the joint treated in the manner described. And I should ask that the site of puncture might be first numbered by the application of a little piece of ice and some salt."

WHEN TO STIMULATE.—Perhaps no better rules based on the condition of the heart can be formulated for the administration of stimulants than those which Stokes has laid down for our guidance. The following, according to him, are the physical signs which seem to indicate the early use of stimulants:

1. Early subsidence of the first sound, observed over the left ventricle.
2. Diminution of the first sound over the right ventricle.
3. The heart acting with a single, and that the second, sound.
4. Both sounds being audible, but their relative intensity being changed, so as to represent the action of the heart of a fœtus *in utero.*
5. With these signs, progressive diminution of impulse, which occasionally becomes imperceptible, even when the patient lies on the left side.—*Therap. Gaz.*

THE CANADA LANCET.

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AGENTS.—DAWSON BROS., Montreal; J. & A. MCMILLAN, St. John, N.B.; GEO. STREET & Co., 30 Cornhill, London, Eng.; M. H. MAHLER, 23 Rue Richer, Paris.

TORONTO, AUGUST, 1891.

THE LATE HOMŒOPATHIC CONVENTION.

Our homœopathic brethren have been convening at Atlantic City. So far as may be judged, the meeting was not occupied to any great extent in the consideration of scientific subjects, but rather in vaunting homœopathy, and belittling the allopaths. They also spent a good deal of time in getting ready to place on record their dissatisfaction with the present condition of medical legislation.

The fact that insurance companies discriminate against homœopathic examiners, was the cause of a paper being read by Dr. H. C. Cowperthwaite. It seems that the hardheaded business men who manage the insurance companies of the world, object to having men act as examiners, who are not educated in medicine and surgery,—wisely having the financial interests of their institutions at heart. Now, while we do not for a moment wish to insinuate that there are no homœopaths who are professionally educated, we are of opinion that when such is the case, it is not because of, but in spite of, homœopathic science. Surely a corporation doing business with the public and for its directors, and with the interest of its patrons at heart, should have the liberty to say who is, and who is not, competent to act as an officer for such corporation. But the insurance companies are to be coerced. One company in answer to an enquiry as to why such appointments were not made replied "Our business will be conducted in future, as in the past, on strict *business principles*," (the italics are ours). Whereupon a homœopathic contemporary says, "If homœopathic physicians will interest themselves and their patrons to the extent of refusing to take insurance in any company not having at least some homœopathic physicians on their examining staff, the companies will soon find that it is a correct and strictly business principle to have representatives of the new school of medicine on their staffs. When you are asked to take out a policy, be sure to enquire if the company has homœopathic physicians as examiners. If not, decline to take insurance in the company, and the end will soon be reached."

The same journal, in referring to the very full reports of the Convention which appeared in the daily papers, says: "Allopathic bigotry and intolerance, even on an occasion like this, could not be suppressed. The serpent of jealousy showed its malicious and venomous head, and was justly rebuked by one of the great daily papers."

This is refreshing, especially when the whole medical and surgical work done at the Convention comes to be considered, which was, if the reports of the proceedings may be depended upon, almost nothing. A painting of Hahnemann was unveiled with the following: "O senseless image of the mighty dead, could those dumb lips but speak the words that we would hear, could those dead eyes but flash the truth, blest indeed would we be. And could thy spirit from its earthless home but come and bless us for our duty done, then, in the cause for which you lived and died, the travail of your soul is satisfied."

Dr. Crouch, in a paper of suggestive title, viz., "The Ethical basis of the separate existence of the Homœopathic School," said some things which showed a true scientific (?) spirit, and much tolerance. For instance: "To increase peristalsis, where deficient, or to arrest by drug poisoning, where in excess; to force or diminish secretions; to accelerate or retard the circulation; to stop all voluntary and many involuntary activities, and demand that it be called sensible or scientific doctoring, is a travesty upon logic and a caricature of common sense."

The learned doctor who wrote the above, says further on, that "The 'allopath' has no more actual science than the Indian medicine man, who essays to cure by blowing feathers and beating tom-toms." That also, "The 'allopathic' principle of practice is not one whit in advance of that

of prehistoric man, nor in any way changed except by the unfortunate doctrine of the illustrious Galen."

A paper on "Backache," by Edwin T. Blake, of London, was read, and apparently pretty well discussed. So far as we can discern, the lecturer thinks that the trouble is caused usually) and the chief caution was, notwithstanding the fact that he is a homœopath, as to the *cause*), by say, a "bent whalebone or the button on a heavy shirt; a non-woollen trouser waistband, soaked with sweat and causing resultant chill."

Some of them who followed in the discussion had discovered various causes for the trouble, as a knot in a corset string, a heavy silver watch pressing on the intercostal nerves, etc. One doctor concluded that backache was due to deficient circulation, and she "first taught her patients how to breathe." And so on.

It is a pity that many educated men, and such there are in the homœopathic school, should countenance by their presence such nonsense as we hear gravely put forth as leading tenets in the faith. "Dynamization by attenuation," may sound very well in ignorant and unlearned ears, but in this present day of earnest scientific research, of the new science of bacteriology, of pathology, of the microscope and instruments of precision, the expression seems to us foolish.

The disregard of pathology which homœopathy allows is perhaps the weak point in the system. If we understood the matter correctly, the whole science consists of a knowledge of a list of symptoms of disease on the one hand, and a list of the symptoms produced in healthy men by various drugs on the other. It could only be under such a system that the remark that "*Rhus.* acts best in the *right* hip," and "*Stram.* has remarkable control over the disease in the *left*," could pass unchallenged, and without the speaker being silenced.

Yet a body of men and women, holding such views, is held up for our admiration as the "scientific school of medicine," they are the "five hundred of the ablest physicians of the world," and "the results of the deliberations of this scientific body will be felt for years to come." It is enough.

THE ABORTION OF SYPHILIS BY EXCISION.

A great deal has been written *pro* and *con*, on the possibility of the prophylaxis of syphilis by early excision of the primary sore. Delightful as it would be to the patient to feel that after infection he could, by a simple ablation of the sore, be saved from the long and tedious treatment for syphilis, recent consensus of opinion is almost unanimous against the possibility of any such happy consummation. Dr. R. W. Taylor, in a recent paper in the *Med. Rec.*, gives, very clearly and concisely, the reason *why* such excision does not cause abortion of the disease. He remarks that as late as ten or twelve years ago excision of chancres as a prophylactic measure was quite common, while M. Jullien and a few others still hold to its utility. The writer gives details of four cases, which, when carefully studied, go to show that even in the first days of infection the poison is not limited to the seat of the lesion, but is widely extended. He mentions a case recorded by Berkeley Hill, in which the removal of the infected (torn) surface, as early as twelve hours after cohabitation with a syphilitic woman, did not either suppress or abort the disease.

"Ricord in his later years has said that he considered the destruction of the infecting chancre as absolutely useless (in a prophylactic sense) no matter how early it is done. That it is certain that even before its appearance that syphilis exists, and that even if the entire penis should be amputated before the chancre showed itself, syphilis would follow nevertheless."

In conclusion, Dr. Taylor says: "In this essay I have sought to show why syphilis is not aborted by excision of its initial lesion with a liberal slice of the surrounding parts. The reason, succinctly stated, is that (contrary to the present view) the syphilitic infective process is from the very start a quite rapid one. That the poison strikes directly for the blood-vessels and causing there its peculiar changes, runs along them with astonishing rapidity. Thus it gains a foothold in parts beyond the reach of the knife, the caustics, or electrolysis. In fact, the tissues of the whole penis in very early syphilis are, we may say, honeycombed by these infected vessels. These observations just presented, backed by the evi-

dence of the failures in chancre excision, go to show that beyond the chancre there is sufficient syphilitic poison to infect the whole economy, and that the initial lesion, though the visible and exuberant evidence of syphilitic infection, may be removed without in any way altering or modifying the course of the disease. It is rather too early to inquire into the *modus operandi* of the maturing syphilitic infection, but it seems probable that this vessel cell-growth goes on and on until the whole economy is involved, and that then the explosion occurs which we call the evolution of the secondary period of the disease.

"I am as yet unsettled in my mind as to whether or not these observations will lead to the definite opinion that anti-syphilitic treatment should be instituted just as soon as we positively see the first appearance of the chancre."

CANTHARIDES IN CANCER.—More than twenty years ago (*Lancet*) it was reported that the Russian peasants were in the habit of using some kind of beetle as a remedy for cancer. since that time some observations have been made which would appear to point to the possibility of cantharides being of some use for this purpose. In 1860 Dr. Wilms excised the left breast for a tumor of the size of a small walnut, which was shown by the microscope to be a reticular carcinoma. It returned, and was again excised a year after the first operation. A mixture of tincture of cantharides and camphorated wine in mucilage was now prescribed, and was continued for three months. The patient, who was a widow at the time, afterwards married again, and gave birth to two children. She is still alive, and there has been no recurrence. Again, in 1880, a somewhat extensive cancer of the breast was operated on in the Augusta Hospital, after which the patient was treated with cantharides, and was known to have had no return of the tumor six years later; indeed, she is believed to be alive and well at the present time. Once more, in 1879, a stricture of the œsophagus, evidently of a carcinomatous nature, developed somewhat rapidly in a female patient; she was treated with cantharides, and a decided improvement took place, so that she was able to swallow pieces of food if they were well masticated. She is alive still, but feels, however, some inconvenience from the stricture, and at times is obliged to have recourse to the cantharides. The above interesting facts are published by Dr. Wolfert in the *Berlin Klin. Wochenscrift.*

SUMMER DIARRHŒA.—Carharrer gives the following in bad cases (*Medical Standard*):

℞—Acid salicylic, ... gr. ss.
Cretæ precip., ... gr. x.
Glycerin, ... ʒ ij.
Aq. rosæ, ... ʒ xiv.—M.
Sig.—ʒ j. every hour for a child one year old.

The following are useful in intractable cases:

Loomis' diarrhœa mixture—
℞—Tr. opii, ... ʒ ss.
Tr. Rhei, ... ʒ ss.
Tr. catechu co. (U.S.P.), . . ʒ j.
Ol. sassafras, ... ♏ xx.
Tr. lavandulæ co., ad. . . ʒ iv.—M.
Sig.—ʒ j. every four hours for adults.

Squibb's diarrhœa mixture—
℞—Tr. opii, ... ʒ j.
Tr. capsici, ... ʒ j.
Spts. camphori, ... j.
Chloroformi (pure), . . . ʒ iij.
Alcohol, ad. . . . . ʒ v.—M.
Sig.—ʒ j. every five hours for adults.

Velpeau's diarrhœa mixture—
℞—Tr. opii,
Tr. catechu co. (U.S.P.),
Spts. camphor, each equal parts.—M.

HYPNOTIC EFFECT OF WARM BANDAGES.—Warm baths, as is well known, produce a calming effect, and tend to bring on sleep, and Alldorfer has attempted to apply such a method in patients where a sedative effect is desired and yet where a bath is inapplicable (*Jour. de Méd. de Paris*) His method consists in wrapping the lumbar region and belly with linen cloths soaked in warm water, and then covering them with oiled silk or rubber cloth, so as to prevent evaporation, while the whole is kept in place and loss of heat prevented by a flannel cloth. This procedure is of ready performance, and the author says that by this simple means he has obtained the most astonishing results in the treatment of insomnia. By dilating the large vessels of the intestinal tract, by the warmth applied, a condition of anæmia of the brain is produced, favoring sleep. These large intestinal

vessels have very properly been termed the wastegates of the circulatory system.

Bromide in Epilepsy.—The most satisfactory results are obtained by combining the bromides with some vegetable agent for producing cerebral anæmia (*Kansas Med. Jour.*). The combination also tends to produce tolerance. Among the best agents are the calabar bean, belladonna and cocculus indicus, or their active principles. Combining the bromides tends to prevent bromism, while it increases their physiological action; and while the potassium salt produces diarrhœa the sodium constipates. A very good formula, increasing the salts as required, is:

℞.—Brom. of ammonium . . . gr. v.
Brom. of sodium . . . . gr. v.
Brom. of potass. . . . . gr. x.
Tinct. belladonna . . . . gtt. x.
Aromat. elix. . . . . ʒij.
Pure water . . . . . ʒj.—M.
Sig.—Three times a day.

Treatment of Fissured Hands.—Says the *Jour. de Méd. de Paris:* after having washed the hands in tepid water, apply a small quantity of the following solution to the fissures, and let it dry:

℞.—Tannin . . . . . 1.0 gramme.
Glycerin . . . . 20.0 grammes.
Water . . . . 100.0 grammes.—M.

At night, on retiring, the following salve should be applied:

℞.—Ext. of ratanhia . . 2.0 grammes.
Lanolin . . . . . 50.0 grammes.
Vanillin . . . . . 0.10 gramme.
Rose Oil . . . . . gtt. ij.

M.—*et. fiat unguentum.*

Gloves should be worn at night.

Danger of Moving Typhoid Patients.—Lately published experiences of the Pennsylvania Hospital (*Times and Reg.*) illustrates an important point for medical officers and others to remember. It is clearly shown that typhoid patients brought to hospital before the end of the first week, unless suffering from a very virulent type, are likely to recover. Parallel cases brought in during the second week show three times the mortality. A simple climax is completed by the following clear and concise statement:—"When brought in the third week the mortality is terrific; it is a miracle if the patient does not die." These striking facts are borne out by the experiences of fever hospitals in Great Britain. To move such patients then after the first week is very dangerous.

Cholagogue Tablets. — Huchard (*La Méd. Mod.*):

℞.—Sodii benzoatis, Sodii salicylatis, Rhei pulv., } of each . . ʒ j.
Ext. nucis vomicæ, ... gr. v.
Ft. tabellæ No. xx.
Sig.—One at each meal.

Greenish Diarrhœa of Babes.—The *Med. Rec.* gives the following:

℞.—Zinci. sulpho-carbolas., . gr. ijss.
Lactopeptine, . . . gr. xij.
Bismuth subnit., . . gr. xviij.—M.
Et. divide in chart No. xii.
Sig.—One every two hours until relieved: then increase the interval and give as necessary to control the bowels.

Books and Pamphlets.

Notes on New Remedies,; including those on the Additions to the British Pharmacopiœa of 1890, compiled by E. B. Shuttleworth, Dean, and Professor of Chemistry, Ontario College of Pharmacy, Lecturer on Pharmacy at Trinity Medical College, Toronto; Editor of the *Canadian Pharmaceutical Journal*, etc. Toronto: Monetary Times Printing Co., 1891.

This little work of 87 pages will be invaluable to the physician and student. Very few men in actual practice have either the time or opportunity to become acquainted with the host of new remedies which have lately been put upon the market. Some of these are indispensable, some useful, and many useless. Their merits, on the contrary, are discussed for the most part in serial literature, to which Mr. Shuttleworth has free access, and he has taken pains to make the enumeration practically complete up to the present time. We heartily commend the work as being very useful to all who are in any way connected with the healing art. Mr. Shuttleworth's well-known skill as a teacher and his reputation as a thoroughly practical pharmacist, renders it unnecessary to mention that the work is practical.

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